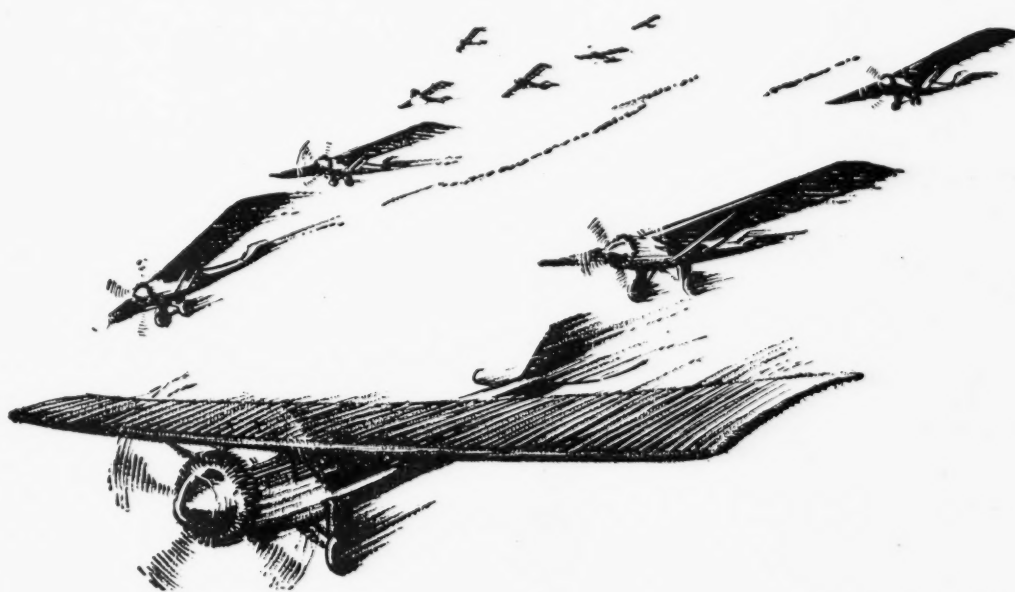


A Chilton Class Journal Publication
Published Weekly August 25, 1927

AUG 27 1927

MOTOR AGE



Through ESSEX thousands know
The Ride that is like flying

In Essex, as in Hudson, the new exclusive, high-compression motor that turns waste heat to power, develops the greatest power per cubic inch of piston displacement of any stock motor we know in the world.

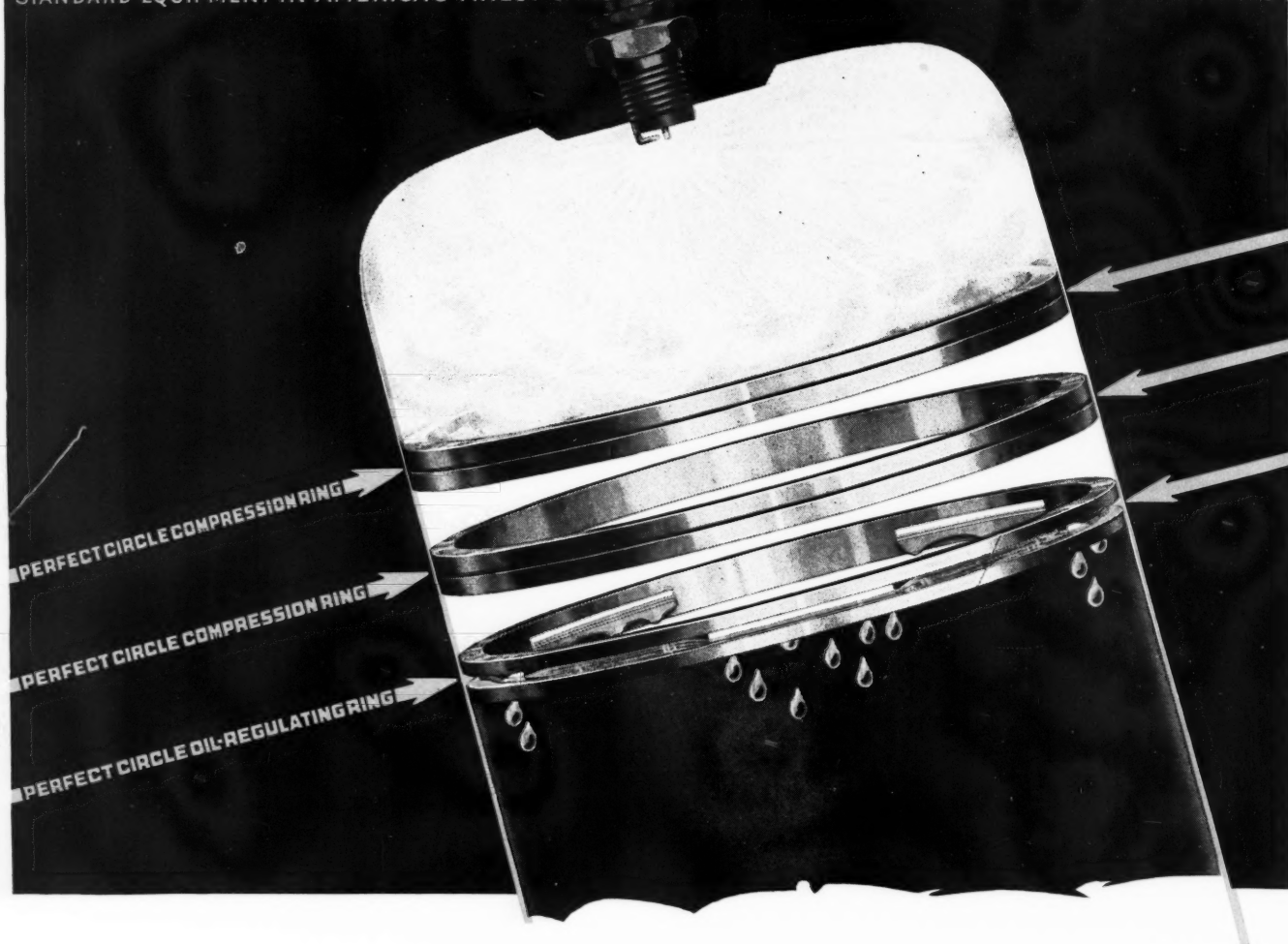
And it develops it economically, because it not only converts heat wasted in other types to useful power, but does it on ordinary gasoline with no need for special, higher-priced fuels.

HUDSON MOTOR CAR COMPANY, *Detroit, Michigan*

HUDSON-ESSEX

The Opportunity Line of the Industry

STANDARD EQUIPMENT IN AMERICA'S FINEST CARS -- WINNER IN EVERY MAJOR RACE FOR FIVE YEARS



The PERFECT CIRCLE combination of one *Oil-Regulating* and two *Compression* rings for each cylinder constitutes the finest in piston ring equipment; stops oil-pumping and blow-by, gives increased oil-mileage, thorough lubrication and maximum compression.

Oil-Regulating Type, 60c and up
Compression Type, 30c and up

For immediate service from your jobber, specify only S. A. E. standard oversizes: .005, .010, .015, .020, .030, .040 and .050.

OIL-TROUBLE and blow-by are bound to occur when imperfect piston rings are used. The *one sure way* to avoid both is to install the PERFECT CIRCLE *combination*—PERFECT CIRCLE *Oil-Regulating* rings and PERFECT CIRCLE *Compression* rings.

THE PERFECT CIRCLE COMPANY, HAGERSTOWN, INDIANA

PERFECT CIRCLE PISTON RINGS

BETTER MADE FOR BETTER PERFORMANCE

This Fan Belt Gives **Real Mileage!**

—and that's language your customers can understand; particularly when you show them how a Farran-oid Fan Belt will save money, time and trouble.

Study the illustration — see how this Farran-oid Dual-flex Molded "V" Type Belt is built around the endless, stretch-proof core of heavy cord and compound. See how the hollow crown permits the belt to completely fill the pulley and transmit full power without slippage! That means real fan belt mileage!

Ask your jobber about the entire line of
Farran-oid Products.

THE FARRAN-OID COMPANY
Akron Ohio

1 Hollow crown expands, forcing belt into contact with entire driving surface — eliminates slippage, and permits belt to transmit maximum power with less tension.

2 Wedge-section of belt completely fills groove of pulley, delivering maximum power and eliminating friction and slippage. Accommodates various pulley angles from 28° to 60°.

3 Body of tough, resilient cushion stock of sufficient size to fit pulley for which belt is designed.



4 Outer cover of two or more plies of close-woven, hard-finished friction fabric.

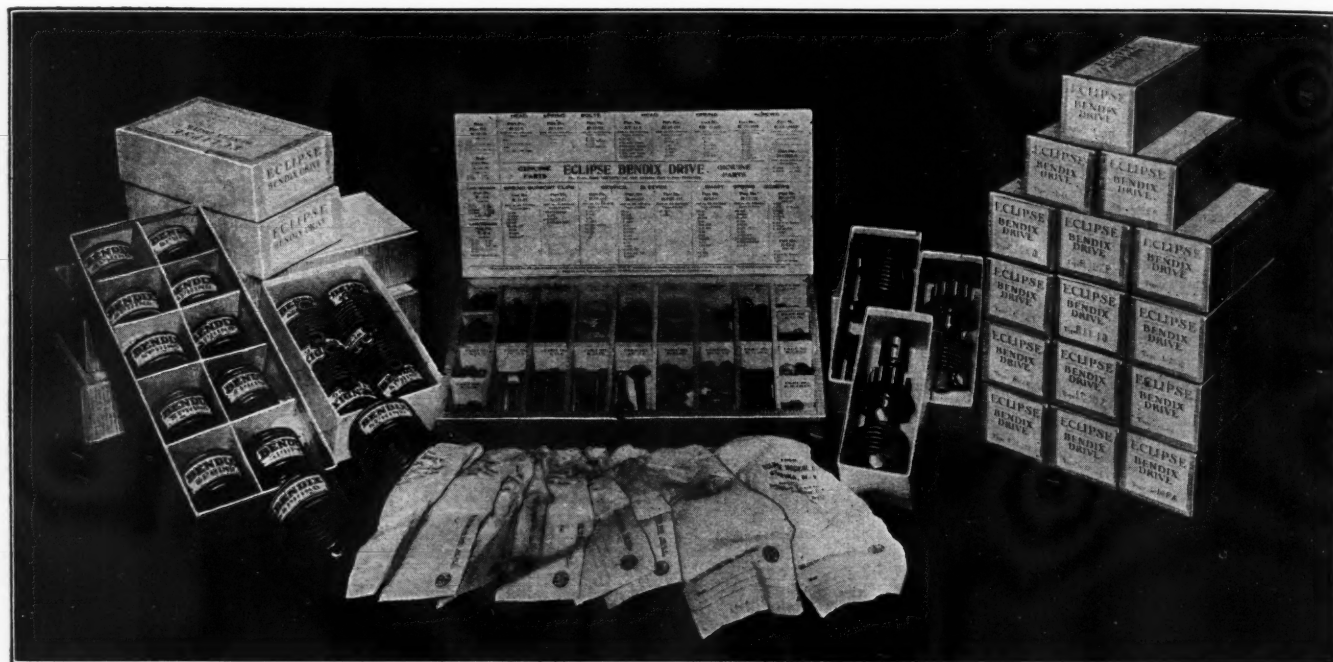
5 Cable core — woven endless. Each individual strand impregnated before cabling, and entire cable again impregnated, thus eliminating internal friction. Vulcanizing process makes cable a solid core of rubber and cord — the backbone on which the rest of the belt is built.

Farran-oid *Products*

Radiator Hose • Garage Air Hose • Car Washing Hose • Blow Out Patches • Tire Plasters
Tube Patches • Combination Patches • Tire Flaps • Ford Floor Mats

ECLIPSE

BENDIX DRIVE



Complete, Dependable Service

—With Only a moderate Investment



Service Station Stocks

The new Eclipse Bendix Service Station Stocks have been developed to enable the repairman to give complete and dependable service on a maximum number of cars with a minimum investment. Service Station Stocks No. 1 enables the servicing of fully 75% of the cars in service today. Service Station Stock No. 2 is even more comprehensive, and enables the servicing of more than 85% of the cars. Fill out and mail coupon below for complete information.

Eclipse Machine Company
Elmira, New York
Department 7.

We are interested in the new Eclipse Bendix Service Station Stocks. Please send complete information, and names of nearest jobbers to

Name _____

Address _____

City _____

THE new Eclipse Bendix Service Station Stocks enable you to make any replacement necessary on the Eclipse Bendix Drives of more than seventy-five percent of the passenger cars in operation today.

Furthermore, you have the assurance that every part is a *genuine* part—exactly the same as used in the original drive. It will give your customers the kind of service they deserve—and are glad to pay for.

The new Service Station Stocks are comprehensive assortments of complete units and genuine parts—selected to serve a wide range of cars and models *without overstocking you*. Nearly every item can be used on several different cars—assuring quick turnover.

It pays to handle only genuine Eclipse Bendix parts, and to give *complete* Eclipse Bendix Service. Ask your jobber about the Service Station Stocks.

ECLIPSE MACHINE COMPANY
ELMIRA, NEW YORK

Eclipse Machine Co., East Orange, N. J. • Eclipse Machine Co., Ltd., Walkerville, Ont.

MOTOR AGE

Vol. LII

Reg. U. S. Pat. Off.
Established 1899

No. 8

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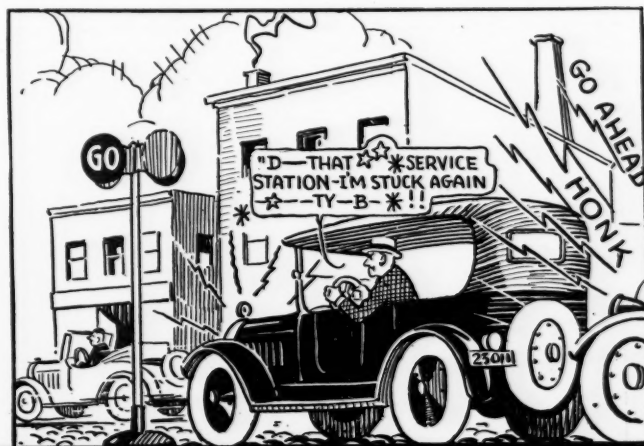
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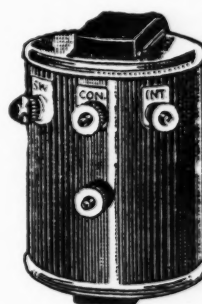
Subscriptions accepted only from the Automotive Trade
Entered as Second Class Matter, June 2, 1927, at the Post Office at Philadelphia, Pa.
under Act of March 2, 1879



When the Signal Says "GO"! —Where's Your Customer?

Is he off to a good start, holding his place in the traffic stream? Or holding up the line, fussing, and fuming, and *blaming you?*

PRIMAX stops all that. It snaps the motor into instant response and keeps it humming along. Fits all cars. Installed easily, quickly. Sold under registered guarantee.



THORDARSON PRIMAX IGNITION

THE ONLY UNCONDITIONALLY GUARANTEED TRANSFORMER

THORDARSON ELECTRIC MANUFACTURING CO.
Transformer specialists since 1895
WORLD'S OLDEST AND LARGEST EXCLUSIVE TRANSFORMER MAKERS
Chicago, U.S.A.

MAIL THIS COUPON NOW!

THORDARSON ELECTRIC MFG. CO.
500 W. Huron St., Chicago, Ill.

Send complete sales information and net trade prices
on Primax Ignition Transformers.

Name

Address

3829

It will always be
easy to *build* a car
without an All-Steel
Body, but it's get-
ting harder and
harder to *sell* one
without it

. . .

EDWARD G.

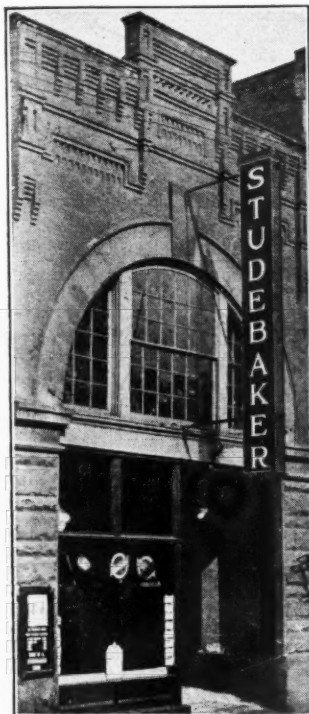
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MFG. CO.

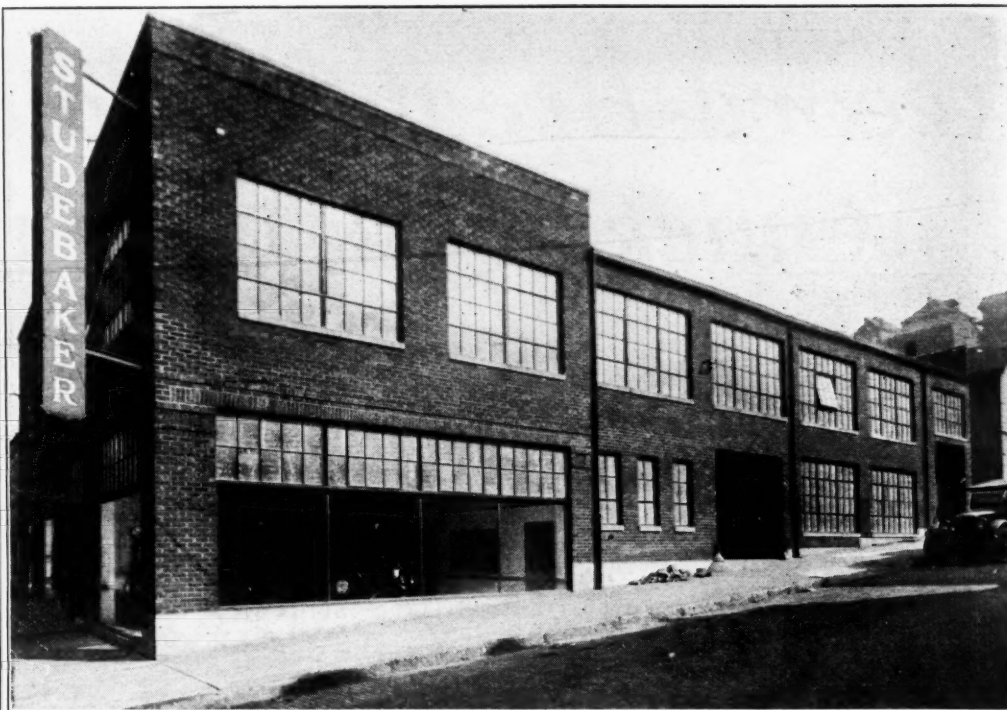
Philadelphia and Detroit



Originators of the All-Steel Full-Vision Automobile Body



In 1916, Mr. Jones sold Studebakers from this small shop



Mr. Jones' small shop has grown to this in 1927—proof that Monessen motorists approve the ability and durability of Studebaker and Erskine automobiles

Sam Jones, of Monessen, celebrates 11th anniversary as Studebaker dealer

THESE photographs prove that each year produces more profit for a Studebaker-Erskine dealer—in Pennsylvania or 47 other states.

On his eleventh anniversary as a Studebaker dealer, Mr. Samuel S. Jones writes from Monessen, Pa., "As one of the oldest automobile dealers in the Pittsburgh district, our wish to continue with Studebaker for the next eleven years speaks louder



Mr. Samuel S. Jones

than anything we could say of the satisfaction and profit in the Studebaker-Erskine franchise."

This valuable Studebaker-Erskine franchise may be inadequately represented in your territory, or not at all, Wire or write *today* for complete and confidential information. Address Department 51, The Studebaker Corporation of America, South Bend, Indiana.

STUDEBAKER

ERSKINE SIX



Two franchises in one—offering cars from \$895 to \$2250

Record-Breaking Sales Quicken Dealer Trend Toward Nash

The phenomenal sales success of the new Nash models which drove July sales 71% beyond the biggest previous Nash July and which will make August the biggest single month of business Nash ever experienced is having its natural effect upon the dealer body of the country.

Farsighted motor car merchants who have been watching the remarkable rise in Nash business during recent years—*with now a great new boom started that overshadows all previous successes in Nash history*—are turning to the Nash franchise in increasing numbers.

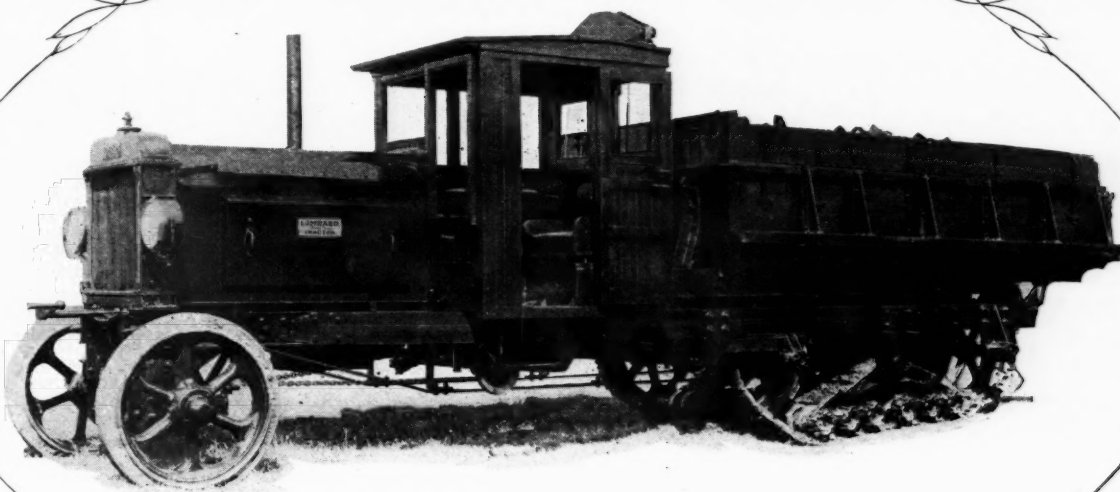
Many dealers of long connection with other companies realize that the time has come for them—*in all fairness to themselves*—to sever their connections and align themselves with companies on the up-grade and they see in Nash a contract of unequalled opportunity.

The aggressiveness of The Nash Motors Company, the public acceptance of its product greater today than ever before, the brilliant character of the new cars, and the solid stability of the organization are the paramount factors that today make the Nash franchise of outstanding desirability to the good automobile dealer whether he is in a large or small community.

Your enquiry relative to a Nash franchise will be answered promptly.

NASH

Leads the World in Motor Car Value



Heavy Loads and Rough Going Are Meat to This Bruiser

THE Lombard Tractor Truck with dump body holds 7 cubic yards with a capacity of 15 tons—a load easily negotiated with its brute 97 H. P. engine and crawler-type traction.

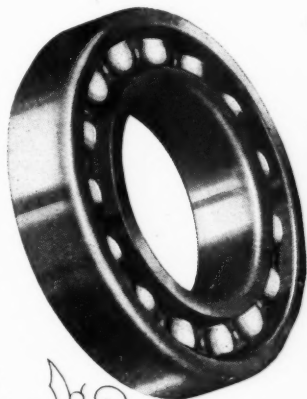
—And to make the transmission as rugged in proportion, New Departure Ball Bearings are used throughout. These high-grade, high-capacity ball bearings keep shafts in line and gears in correct mesh rigidly and constantly, because they are not subject to wear as are other bearing types which are made of less enduring steels and to less precise limits.

THE NEW DEPARTURE MANUFACTURING COMPANY
BRISTOL, CONNECTICUT

Detroit

Chicago

San Francisco



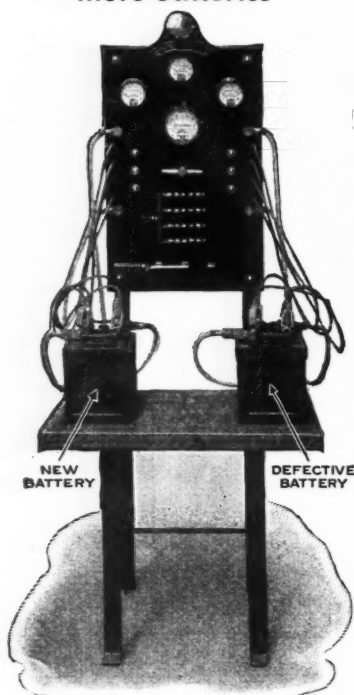
New Departure Quality Ball Bearings

Let Us Help You— *Merchandise Your Service for Increased Profits*

We have a merchandising department to help you build a more profitable business—a service that costs you nothing—but designed to make you the outstanding service station in your community. Tell us your troubles in a letter or use the coupon below.

The Service Station Just Getting by Today will be Passed by Tomorrow:

*This will help you sell
more batteries*



No. 972

Ask your Jobber for Bulletins and Terms—or write for bulletins and name of our jobber near you.

Master Battery Salesman

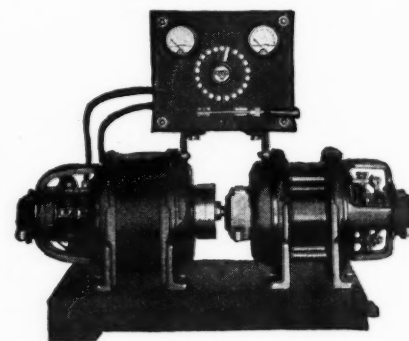
Shows your customer exact condition of his battery by making tests equivalent to actual car conditions, which enables you to explain WHY the repair, or purchase of a new battery, is necessary.

The causes of battery failure are easily detected, because tests can be made of the 5 major parts of the battery.

The Weidenhoff Line

Test Benches for Ignition, Starting and Lighting; Constant Potential Charging Equipment; Lathes for Armature work; Commutator Mica Undercutters; Armature Testers; Bearing and Gear Pullers; Battery Discharge Sets; Cell Testers; Magnetizers.

*This will reduce your cost
of charging and increase
your volume*



Weidenhoff

"SAME DAY"

Constant Potential Battery Charger

The compensating pole construction keeps the voltage constant under all load conditions from no load to 25% overload.

Weidenhoff

Shop Equipment
for Battery and Electrical Service
4358 Roosevelt Road, Chicago, Ill.

MOTOR AGE

VOLUME LII

Philadelphia, Pa., Aug. 25, 1927

NUMBER 8

Output Gaining as Car Sales Increase

Absence of Further Advance in Prices Acts to Stabilize Retail Market

NEW STOCKS LOW

NEW YORK, Aug. 24—Production is continuing at high rate for most of the passenger car producers and there is evidence that the output from the factories is passing rapidly into consumers' hands. New car stocks held by dealers have had only the usual seasonal advance, and so far as this point is concerned the retail end is considered in good condition.

A gradual tapering off in production schedules is expected next month, but for the industry as a whole the seasonal recession of a majority of the factories may be counterbalanced by a rapid advance of the Ford organization into high production. In this respect, however, the plans of the Ford company remain a closely guarded secret, and just when the big plants at River Rouge and Highland Park are to swing into volume output of the new car is subject of speculation.

The absence of further price changes has helped to stabilize the market for motor cars.

Balthaser Heads NSPA Show

DETROIT, Aug. 22—Fred C. Balthaser has been named manager of the 1927 National Standard Parts Association show to be held in Cleveland, Nov. 14-18. He succeeds John Servas, who resigned because of business in Chicago during November which would make it impossible for him to handle the show.

For 10 years Mr. Balthaser has had wide experience in show management and some of the large expositions which he has directed are the American Foundrymen's Association Show and that of the Dairyman's Ice Cream Machinery Manufacturers Association.

Kohl With Automotive Tool

MILWAUKEE, Aug. 22—Fred W. Kohl has joined the Automotive Tool Mfg. Co. as vice-president in charge of sales. Mr. Kohl is widely known in the automotive wholesale field, having been in direct contact with jobbers for a number of years.

Get Ready!

NEXT week's issue of MOTOR AGE will carry a FOUR VOTE coupon in the jobber salesmen's Popularity Contest.

Be ready to clip it and boost your favorite wholesale salesman to a winning position in the \$2,075.00 Cash Contest.

Bartsch Export Corp. Regional Sales Head

SPRINGFIELD, MASS., Aug. 24—Alfred H. Bartsch, general sales manager of American Bosch Magneto Corp., has resigned to join General Motors Export Co. He has been a regional sales manager and will leave Springfield Sept 1. to take up his new duties at the export company's New York headquarters preliminary to going abroad.

Mr. Bartsch is one of the best known sales executives in the industry. His connection with Bosch has covered almost 20 years in all, he having been connected with the original company.

With the entrance of the United States into the war, Mr. Bartsch left the Bosch company to join the McLain Simpers Organization, Philadelphia, advertising and merchandising counsel. While there he handled the Bosch account on a consultant basis and became advertising and merchandising counsel when the alien property custodian took over the property. With the return of the plant to private ownership in 1918 he returned as general sales manager.

Pile Sales Manager

NEW YORK, Aug. 24—J. Howard Pile has been appointed sales manager of Smith & Gregory, distributor of Balcrank bumpers, Cox shock absorbers, Vernay radiator shutters, Gruss & Westinghouse Air springs, and other lines.

Mr. Pile was formerly connected with the New York branch of United Motors Service and prior to that was technical editor of *Motor World*.

Lawson Gets Trophy

PORTLAND, ORE., Aug. 23—H. P. Lawson, district manager for the Willard Storage Battery Co., has just received a silver trophy as the award for his district leading over all other districts in volume of sales for the first six months of this year.

Webster Seeks to Abolish Excise Tax

Calls It Rank Discrimination and Urges Car Owners to Seek Relief

A. E. A. WILL ACT

CHICAGO, Aug. 23—Combining action within his own organization with a plea to every car owner in America, Commissioner William M. Webster of the Automotive Equipment Association today turned the opening gun of the winter barrage on automobile excise taxes.

Mr. Webster denounces the tax as a rank discrimination that can be justified neither by economics, politics, nor the present sound condition of the United States treasury. He urges every automobile owner immediately to bring pressure on his senator and congressman.

President Coolidge's warning that the amount of tax production will depend on the amount congress spends for "pork" in the 1928 campaign is used by the commissioner as a further argument in his campaigns.

The senate committee's proposal to reduce the tax from 3 per cent to 1½ per cent instead of abolishing it altogether, Commissioner Webster stigmatizes as a "cure that is as bad as the disease, because it continues an unfair burden of taxation and dodges taking a step which right and justice demand."

Complete repeal of the tax is the program which the A. E. A. will demand, and official action will be taken by that body, says the commissioner, to present its views to congress.

"With one car, bus or truck for every five citizens of the United States, a Federal tax of 3 per cent on automo-

(Continued on page 12)

Glancy Host to 800

PONTIAC, Aug. 22—A. R. Glancy, president and general manager of the Oakland Motor Car Co. was host to more than 800 persons employed in the offices of the company at a picnic at the General Motors Proving Grounds, near Milford, last week.

Korshin Leaves Whitney

HARTFORD, CONN., Aug 23—Matt R. Korshin, who for the past three years has been field representative for the Whitney Mfg. Co., has resigned.

Ford Plane to Hold 100, Maddux States

Air Liner to Chute Passengers to Ground on Chicago to Los Angeles Run

SAN FRANCISCO, Aug. 25—In a statement issued at Los Angeles, J. L. Maddux, representing the Ford interests, announces that passenger-carrying flights on regular schedule between Chicago, Los Angeles and San Francisco, is to be inaugurated with the completion of a 100-passenger plane at a cost of \$1,000,000 by the Ford interests. The air liner, according to Maddux, will make no stops en route, passengers being lowered in parachutes to way stations.

The line will serve, Mr. Maddux says, El Paso, San Diego, Los Angeles, San Francisco and Oakland, with connection at the border with mail planes for Mexico City. According to Mr. Maddux, a \$5,000,000 air transport company is being organized to operate the plane. Twelve-passenger planes, to the number of 20, are to be placed in service between local points in California, by the same company, Mr. Maddux stated. The Chicago-Los Angeles run will be made in 10 hours, he said.

Leads for Seventh Consecutive Month

DETROIT, Aug. 25—Figures just released show that for the seventh consecutive month Chevrolet registrations have led every other single make of car in Wayne County, Mich., of which Detroit is the leading center.

During July Chevrolet not only topped every other make of car by registering 935 passenger models, but also led the list of truck registrations with 106 commercial cars, an increase of more than 100 per cent over Chevrolet's own high mark in July, 1926.

Wins Beauty Prize

SOUTH BEND, IND., Aug. 23—The President was recently awarded first prize, among stock cars, for its beauty and elegance at the Milano, Italy, automobile salon.

Two Italian made cars, equipped with special built bodies, took first and second prizes at the salon, but the President was considered the most beautiful of all the stock cars assembled at Milano.

Cohens to Sell Chandler

SAN FRANCISCO, Aug. 22—Louis and Charles Cohen, who operate under the firm name of Cohen Brothers, have been appointed retail dealers for the Chandler in this territory.

Spokane Dealers Exhibit

SPOKANE, WASH., Aug. 22—Automobile dealers here are preparing for



Returns to Plant

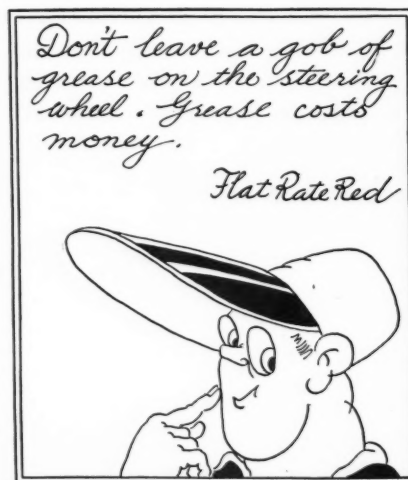
F. H. Rengers, Moon sales head who has returned to the plant after a nine-month survey of the Chicago district.

the Interstate Fair which will be held Sept. 5-10 and at which motor exhibits will probably be larger than ever heretofore.

Transport Motor Co., Wells Chevrolet Co., James L. Elam, Inc., Beeson Brothers and March-Strickle Motor Co. have already signed up for space.

Lloyd at Kansas City

KANSAS CITY, MO., Aug. 23—J. E. Lloyd, manager of the western territory for the Peerless Motor Car Co., has been in Kansas City for a visit with the branch here. Mr. Lloyd announced here the appointment of the Carlock Motor Co., Wichita, Kan., and R. T. Brown, Salina, Kan., as Peerless dealers.



GMC Half-Year Net Nearly Twice Steel

But Car Concern Much More Conservatively Valued in Stock Market

NEW YORK, Aug. 22—General Motors Corp., although earning in the first half of 1927 almost twice as much as United States Steel Corp., is much more conservatively appraised in the stock market, it is shown by comparison of the latest financial statements of these two industrial giants.

Net profits for all securities of General Motors in the first six months of 1927 were \$129,250,207, whereas U. S. Steel of the same period reported total earnings of \$65,647,045. For the common stock General Motors earned \$124,841,987, which was more than three times the balance available for U. S. Steel common, amounting to \$39,855,360.

At the closing price on July 28, Dow, Jones & Co. points out General Motors total market value was \$2,128,821,000, while the valuation of Steel was \$1,928,118,488. These figures include the market value of the stocks and the par value of the bonds outstanding. The market value of General Motors securities was 16.471 times the six months' net income, whereas Steel's market value was 29.366 times the first half year's income.

If, therefore, General Motors was selling on the same basis as U. S. Steel, its market appraisal would be \$3,795,561,579. Subtracting \$165,926,892 the market value of General Motors preferred, the appraisal of the common stock would total \$3,629,634,684, or \$417.20 a share.

Pierce-Arrow Tests in Charge of Veteran

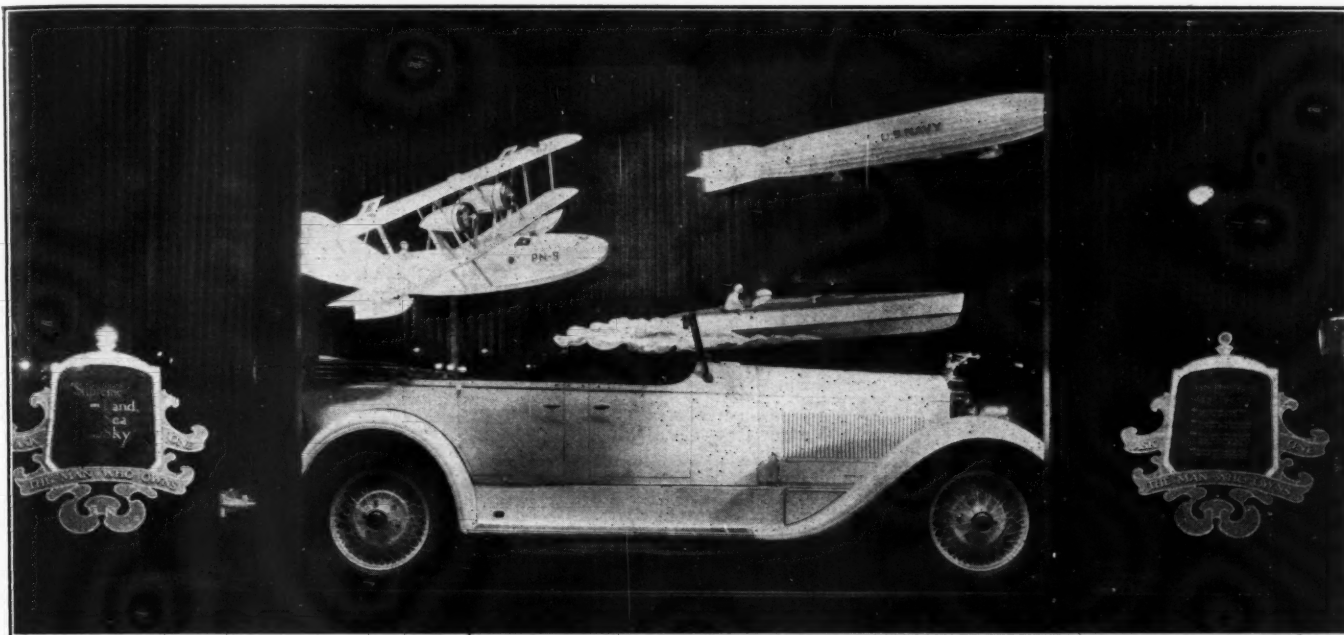
BUFFALO, Aug. 24—The recent award of a 25-year gold and diamond service medal to Edward Retling, chief tester of the Pierce-Arrow Motor Car Co., by President Myron E. Forbes, brings to mind an interesting bit of ancient history in connection with the Glidden tours, staged almost two decades ago, wherein Mr. Retling played a prominent part. Mr. Retling is one of a large group of Pierce-Arrow veterans.

Howes With Simplex

CLEVELAND, Aug. 23—B. W. Howes, who has formerly been connected with Panyard Piston Ring Co., has lately joined the sales organization of The Simplex Piston Ring Co.

Green Is General Manager

DALLAS, TEX., Aug. 22—Walter Green, formerly of Los Angeles, has been elected vice-president and general manager of the J. L. Green Co., Dallas Chrysler dealer.



Here's Show Window Number 5

Here we have a show window that might appropriately be titled, "The Era of Effortless Speed." We see the airship, the motor boat and the biplane in the background, while at the front of the window we have the modern automobile. We thank the Packard Motor Car Co. of New York for this one. Where's yours?

Fred G. Vincent Made Kansas City Reo Head

KANSAS CITY, MO., Aug. 22—Announcement has been made of the appointment of Fred G. Vincent as vice-president and general manager of the Reo Motor Car Co. of Missouri with headquarters in Kansas City. Mr. Vincent will have charge of the branch here and in St. Joseph, Mo., and the distributing stores in Wichita, Kan., Oklahoma City and Tulsa, Okla. He succeeds George H. Cox who served as manager of the Reo branch here, Mr. Cox having resigned.

Mr. Vincent has been in the automobile business for many years, having been connected with General Motors for 14 years before joining the Reo organization.

Norris Star Distributor

KANSAS CITY, MO., Aug. 22—The Norris Motor Co. has been changed from a Star dealership to the Star distributor for western Missouri and eastern Kansas, 58 counties in the two states being in the territory served. Ray Norris is president of the company.

W. S. Cook, formerly sales manager here for Durant Motors, is in charge of the new wholesale department of the company. He has two salesmen and the three spend virtually all their time in the territory.

Extends Year's Privileges

TALLAHASSEE, FLA., Aug. 23—Florida has the most liberal reciprocity law governing motor vehicle licenses of any state in the Union since the enactment of the new statute by the recent legislature. This state extends to

visitors privileges for the full year, regardless of how long local tags are recognized in other states.

Whippet-Knight Motor Co. Columbus, O., Distributor

COLUMBUS, OHIO, Aug. 22—The Whippet-Knight Motor Co., has been formed for the purpose of distributing the Willys-Knight, Overland and Whippet line.

Charles Zimmerman is president and W. E. Miller is vice-president and general manager of the company.

Baker Wins Free Trip

PORTLAND, ORE., Aug. 25—Lloyd Baker, salesman for Walter Metzger, has been made a member of the Chevrolet "72" club, which entitled him to a free trip to the company's factory in Detroit.

Orders Automobiles off Urbana Streets

URBANA, ILL., Aug. 25—The mayor has ordered the automobiles which have been running between this city and Champaign to stop on account of the noise they make. They are said to frighten horses and to be a menace to the public safety. The council has instructed the corporation council to draft an ordinance restricting the use of automobiles to certain streets.—From Motor Age, Aug. 22, 1901, twenty-six years ago.

J. V. Mahoney Talks to K. C. Chandler Dealers

KANSAS CITY, Aug. 22—More than 75 Chandler dealers and associate dealers from Missouri, Kansas, Oklahoma and Nebraska have been in Kansas City for a conference with J. V. Mahoney, general manager of the Chandler-Cleveland Automobile Sales Co., and factory officials. A premier showing of the new model Chandlers was given at the meeting. The sales company serves as a factory branch for the Chandler-Cleveland Motors Corp.

Addresses were made at the conference by Mr. Mahoney and Ralph Nettleton, sales manager from the factory organization.

Atwood Has Peerless

SPRINGFIELD, MASS., Aug. 24—The Atwood Motors Co. of this city has been appointed distributor for Hampden, Hampshire and Franklin counties, for the Peerless Motor Car Co., and the full line is now being displayed at the new salesrooms, 889 Main St. D. L. Atwood, president and treasurer of the company, is sales manager; A. Ross Thompson is secretary; and Sydney S. Grant is in charge of the used car department, at 10 Freemont St.

Gets Patent on Car Seat

WASHINGTON, Aug. 23—After six years of litigation, Frank Wells has been issued patent No. 1636885 by the United States Patent Office allowing a claim for protecting pads for automobile seats. Wells' claim was rejected by the examiners but allowed on appeal.

Stock Cars in 3 Races Labor Day

Atlantic City Speedway to Be
Scene of Big Card—60
Already Entered

ATLANTIC CITY, Aug. 23—Conditions, plans and prizes for the Labor Day stock car race to be held at the Speedway, were announced today by the contest board of the American Automobile Association. With 60 cars eligible to start in the three races of 25 miles, 75 miles and 150 miles, the entries will be limited strictly to stock cars of American manufacture and to open models only. These cars must take the track exactly as catalogued and advertised, and each must pass the examination of technical experts appointed by the Contest Board to see that no special racing equipment has been added.

Only the fenders, windshields and running boards may be stripped off, while the headlights will be removed for greater safety.

Many noted race drivers will compete. The first of these is Wade Morton, veteran driver of the speedways, who will head the Auburn team.

Magnificent silver trophies will be awarded the winning car in each race, while \$5,000 in prize money will go to the triumphant drivers.

Seeks to Abolish Tax

(Continued from page 9)

biles is a levy that not only affects every consumer of transportation but also definitely retards sales of cars, to say nothing of equipment, because it defeats the marked economies in production which the industry has been able to effect," says the commissioner.

"Constitutionally the tax is a rank discrimination because Congress long ago abolished all other forms of war taxes except the levy on firearms. From the point of view of economics, the tax is absurd because it is a levy on a universal and essential means of transportation. Politically it is nothing short of foolish, because the treasury does not need it. Congress should and must abolish this abuse completely at the coming session."

"Paige Progress" New Paige House Organ

DETROIT, Aug. 23—The Paige-Detroit Motor Car Co., this week, is introducing the first edition of its new house organ *Paige Progress*. The magazine is printed in brown ink on white paper and is eight pages. It is a vast improvement over its predecessor *The Paige Radiator* which was for a long time familiar to persons throughout the Paige organization.

Wolverine Cabriolet Next

LANSING, Aug. 23—The Reo Motor Car Co. announces that a Reo-Wolverine cabriolet will be introduced soon as a companion to the Wolverine brougham.

Form Acme Sales Co.

ASHEVILLE, N. C., Aug. 23—The Acme Truck Sales Co. has been chartered with an authorized capital stock of \$50,000. William Winter, Neill Herndon and J. T. Herndon, all of Asheville, are the incorporators.

Hoban Made Sales Manager

HARTFORD, CONN., Aug. 24—The Delaney Chevrolet Co., which recently took over the Chevrolet franchise in this territory, has appointed W. M. Hoban sales manager. For the past six years he had been associated with the Delaney interests in Providence.

NADA to Meet at Cleveland Sept. 14

Program for First Day to Be
Devoted to Discussion
of Management

CLEVELAND, Aug. 24—This city will be the scene of the Third Annual Convention of the Ohio Council of the National Automobile Dealers Association, Sept. 14 and 15.

Two days will be utilized for business and pleasure and the program for the first day will bring together a coterie of business stars which will discuss "Management" in all its phases as applied to the automobile dealers.

All business sessions will take place at the Cleveland Hotel, Sept. 14, beginning at 10 o'clock and continuing until four with a buffet luncheon interspersed. At 6.30 a banquet will be given in the ballroom of the Cleveland Hotel with undoubtedly the finest entertainment that has ever been presented at a dealers' convention.

On Thursday, Sept. 15, the day will be spent at Acacia Golf Club, Richmond and Cedar Roads, where not only the finals of the present intercity golf tournament will be played but many foursomes of dealers from every part of the state will mark the day. Prizes will be awarded in the golf events. About a thousand dealers will attend.

New Field Editor

PHILADELPHIA, Aug. 24—Warner Baker, who, for a period of 18 months, up to a year ago, was a member of the staff of *MOTOR AGE*, has returned to the Chilton-Class Journal Co., as field editor, with headquarters in Chicago.

After getting his degree at Montana State College, Baker operated sales and service stations at Broadview, Mont., and Billings, Mont., where he sold Chevrolets and Dodges.

Prior to his *MOTOR AGE* staff connection, he had had 14 years of daily newspaper work in the west and south. During the past year he was night editor of the *Chicago Herald-Examiner*.

Distributes Stromberg

ST. LOUIS, MO., Aug. 25—The S. G. Hoffman Magneto Co., Inc., 3876 Washington Blvd., has been appointed distributor in the St. Louis district for the Stromberg Motor Devices Co., Chicago, Ill.

James R. Medart is owner of the Hoffman Co.

McFarland With Medlin-Buick

JACKSONVILLE, FLA., Aug. 23—The Medlin-Buick Co. announces the appointment of A. M. McFarland, recognized as one of the best used car executives in the state, as manager of its used car department.



Falcon-Knight "Grey Ghost"

This strikingly beautiful roadster is the Falcon-Knight Grey Ghost. It is not only beautifully appointed and finished but has a most useful innovation in the form of a top for the rear seat. It is priced at \$1,250

European Progress Noted by Jordan

Prosperity of Past 12 Months Reflected in American Car Sales

DETROIT, Aug. 23—Europe has shown more progress in business advancement and consequently greater prosperity during the last 12 months than in the entire three years previous, according to Edward S. Jordan, president of the Jordan Motor Car Co.

American motor car manufacturers have felt the results in materially increased business.

In spite of difficult tariff barriers and keen foreign competition, American manufacturers have made astonishing headway in European markets.

Jordan points out the fact that in South America, well over eighty per cent of the cars in use are of American make, and a very extensive road building program will bring a further increase next year.

South Africa is another country where roads are being built and where American cars are preferred.

Jordan has just recently established an export department to handle increased demand from abroad. The new Little Custom Jordan has scored heavily in the foreign field because of its resemblance to the favored European types in size, appearance and comfort but with the addition of American qualities of performance. Jordan is exhibiting cars at the Paris Salon as well as at the National Shows in London and Berlin.

Sixteen Exhibit Latest Cars at Seattle Show

SEATTLE, Aug. 17—Sixteen automobile merchants here joined in exhibiting the latest creations in motor cars at the Pacific Northwest Merchants' Exposition in this city. It was the largest automobile display in Seattle motor car history and represented the cooperative endeavor of the following: Vernon Smith, Kenworth truck; C. J. Wells, Chevrolet; Harry Thompson, Star; A. P. Nute, Hudson-Essex; R. W. Sweet, GMC truck; Floris Nagelvoort, Cadillac-LaSalle; A. R. Tyson, Oldsmobile; A. S. Eldridge, Buick; T. D. Davies, Falcon-Knight; August Johnson, Willys-Knight, Whippet; W. L. Eaton, Dodge; H. W. Rowland, Auburn; S. L. Savidge, Hupmobile; E. G. Battenberg, Peerless; L. G. Raynor, Gardner; P. N. Irwin, Chandler.

Made Goodyear Distributor

ST. LOUIS, MO., Aug. 23—Henry & Maginnis Tire Co., 1422-1432 North Tenth St., has been appointed solid tire distributor in St. Louis by the St. Louis Branch of the Goodyear Tire & Rubber Co.

Schade, Dimond and Dreher Join Quiz Hall of Fame

NOT to be outdone by G. E. Lantz, of Boston, three other Constant Readers of MOTOR AGE came to bat with contributions to the weekly automotive quiz. They are Herman P. Schade, of Philadelphia; L. B. (Jack) Dimond, of Chicago, and A. H. Dreher, of Cleveland. Their queries are included in this week's list of questions, properly acknowledged, of course. And another one of Mr. Lantz's list of five finds a place in today's catechism. We think this is the most interesting quiz of all.

1. To what product of what company is the slogan, "It Won't Shake Loose" applied?
 2. "It's the coil that does the trick" identifies what well-known make of automotive equipment?
- (Asked by Herman P. Schade, Philadelphia, Pa.)
3. What prominent automobile company uses a sightseeing bus to show visitors and dealers through its plant?
 4. What is the N. A. C. C. formula for figuring H. P.?
 5. How is the displacement of an engine figured?
 6. What automobile company published the advertisement, "Penalty of Leadership," in 1915, has republished it several times since, and has allowed many other manufacturers and merchants to use reprints of it?
- (Asked by L. B. Dimond, Chicago, Ill.)
7. What does the word "equipoised" mean and what manufacturer first used it in automobile advertising?
- (Asked by A. H. Dreher, Cleveland, Ohio)
8. How do you figure the area of a circle?
 9. How do you figure the circumference of a circle?
 10. Name the two men who discontinued a parts manufacturing business netting them several million dollars a year profit, to put out a car under their own name.
- (Asked by G. E. Lantz, Henshaw Motor Co., Boston, Mass.)

ANSWERS TO AUG. 18 QUESTIONS *

1. "Packard is never seen, except on goods of honest value," is the slogan of the Packard Electric Company, Warren, Ohio.
 2. Dodge Brothers, Inc. has two dealers on its Board of Directors. The present incumbents are G. H. Thornton, of Philadelphia, and Russell Dashiell, of Chicago.
- (Asked and answered by G. E. Lantz, Henshaw Motor Co., Boston, Mass.)
3. When the timing chain wears the timing is retarded slightly.
 4. Slack in the timing chain causes the camshaft to run in an erratic manner, owing to the spring action of the valves on the cams. Irregular engine operation at low speed will result, due to constantly changing valve and ignition setting.
 5. Ignition wire is subjected to heat, cold, oil and vibration, and hence deteriorates. This leads to poor ignition, with resultant loss in power, increased vibration, increased fuel consumption and uneven pulling. Uneven pulling causes excessive strains and wear on the clutch, transmission, universals and rear axle.
 6. A good quality of mineral oil is not permanently thinned out by ordinary heating such as it gets in automotive service. It is dilution that thins an oil permanently. Heat drives off the lighter ends of oil and hence, if it were not for dilution, old oil would frequently be found heavier than it was when new.
 7. There are said to be between 9000 and 10,000 separate parts in the average make of car, counting every nut, bolt and washer.
- (Asked and answered by G. E. Lantz, Henshaw Motor Co., Boston, Mass.)
8. Aluminum is a basic metal. It is bluish silver-white in color, very malleable, ductile and sonorous, and noted for its lightness and resistance to oxidation. It is the most abundant metallic element, constituting, as is computed, 7.3 per cent of the earth's crust, but always occurring in combination.
- (Asked by Julian Chase and answered by Noah Webster)
9. The first long-distance automobile reliability tour in America was named after Charles J. Glidden, who donated a \$2,500 trophy in 1905. It was run from New York to Bretton Woods, via Boston, and back to New York via Lenox, Mass. The winner, Percy Pierce in a Pierce, was determined by a majority vote of the contestants.
- (Asked and answered by G. E. Lantz, Henshaw Motor Co., Boston, Mass.)
10. The most interesting weekly circulating in the retail automotive trade is MOTOR AGE, published since Sept. 12, 1899.

(Asked and answered by the modest Editor)
* These answers are not guaranteed to be correct, but are obtained from sources we believe to be reliable.

Jordan Car to Have New Power Plant

Secretly Developed Unit Said to Have Characteristics of Airplane Motor

DETROIT, Aug. 24—Interests close to Jordan Motor Car Co. state that calls had been sent to various dealer groups in the Jordan organization to visit the factory within the next few days to view a new power unit, incorporated into the new Jordan eight-cylinder car. The new unit has been under development for several months.

For reasons of sales expedience Mr. Jordan refuses to reveal the details at this time, but it is understood that the motor is said to have characteristics strikingly similar to those of the finest aeroplane motors and represents the work of months on the part of Jordan, Continental and Stromberg engineers.

Hitherto, increased power has been attained through large motors which necessarily required heavy chassis. According to reports this is a light motor with high speed characteristics and even greater economy, but embodying 33 per cent increase in horsepower and 21 per cent increase in torque without adding a pound of weight to the car. Production, it is understood, will start shortly.

Hildebrand Optimistic

SPOKANE, WASH., Aug. 24—T. F. Hildebrand, zone manager for Chevrolet Motor Co. with headquarters in Seattle has made a trip throughout Eastern Washington during the past fortnight and gives the following optimistic report:

"From my observations and inquiries I know that this year's wheat crop in the Inland Empire is much better than

Did You Vote Last Week?

IN each issue of MOTOR AGE since June 30, you will find a voting coupon for your favorite jobber salesman. Did you use all of them? If not why don't you clip them all, fill in the name of your favorite salesman and send them promptly to the contest editor of MOTOR WORLD WHOLESALE.

in years. The farmers are getting excellent prices for their commodities. This means much to the business man and the manufacturer."

Bauer Optimistic After South American Survey

NEW YORK, Aug. 23—George F. Bauer, secretary of the foreign trade committee of the National Automobile Chamber of Commerce, returned from a South American trip this week vastly encouraged by the rapid expansion of road building in virtually all countries south of the Panama Canal.

What is mostly needed, he said, is a more general appreciation that roads could best be financed by bonds which would be paid off by the accumulation of motor taxes rather than waiting for taxes to build up sums sufficient for the purpose.

Queen City Co. Incorporates

CHARLOTTE, N. C., Aug. 25—The Queen City Motor Co. has been organized and incorporated here with an authorized capital stock of \$50,000. The concern proposes to engage in a general automobile business. C. E. Pope, D. T. Johnson and P. B. Humphrey, all of Charlotte, are mentioned as the incorporators.

Stewart-Warner Profits \$1,508,878

Will Retire \$700,600 Outstanding Seven Per Cent Preferred Bassick Stock

NEW YORK, Aug. 22—Stewart-Warner Speedometer Corp. reports net income after Federal taxes and all charges of \$1,508,878 for the first quarter, equal to \$2.51 a share on 599,990 outstanding shares of stock.

In a letter to stockholders, President C. B. Smith, says:

"The financial position of the corporation has continued to improve. Working capital amounts to \$12,611,013, with surplus of \$6,541,676. Current assets of \$14,309,136 compared with current liabilities of \$1,698,122, in the ratio of 8.4 to 1. Holdings of cash and marketable securities alone are \$5,263,676, and exceed total current and fixed indebtedness. There are no outstanding bank loans.

"Owing to the fact that the financial position is the best in our history and that the prospects for a continuance of satisfactory business are very favorable, it has been decided to retire at once the \$700,600 of outstanding 7 per cent preferred stock of our subsidiary, the Bassick Co. The stock of our corporation is more widely distributed than ever before, as is evidenced by the largest stockholders' list in our history."

Win "72-Car Club" Laurels

SPOKANE, WASH., Aug. 24—Seven salesmen at the Wells Chevrolet Co. have won memberships in the national "72-Car Club," according to James Whitelaw, manager and vice-president of the company. In order to become a member, the salesman must sell 72 or more cars during a year's time.

What's Coming in Motordom

SHOWS

Automotive Equipment Association, Coliseum, ChicagoNov. 7-12
BaltimoreJan. 21-28
Brooklyn, Brooklyn Motor Vehicle Dealers AssociationJan. 21-28
BuffaloJan. 14-21
*Chicago National Automobile Chamber of Commerce, Coliseum, Jan. 28-Feb. 4
Chicago, Chicago Automobile Dealers AssociationJan. 28-Feb. 4
*Cleveland, Public Auditorium.....Jan. 21-28
ColumbusJan. 14-21
*Dallas, Texas, Automobile Building, Oct. 8-23
DenverFeb. 13-18
Des Moines, ColiseumFeb. 20-25
Green Bay, Wis., Auto Bldg., Aug. 29-Sept. 2
Indianapolis, Auto Show Bldg.....Feb. 13-25
Kansas City, Mo., American Royal Bldg.Feb. 11-18
MilwaukeeJan. 14-21
Minneapolis, Municipal Auditorium, Feb. 4-11
National Standard Parts Association, Convention Hall, Cleveland.....Nov. 14-18
NewarkJan. 14-21
*New York, National Automobile Chamber of Commerce, Grand Central Palace.....Jan. 7-14
New York, Automobile Merchants Association of New York.....Jan. 7-14
PhiladelphiaJan. 14-21
Rochester, N. Y.....Jan. 23-28

Coming Feature Issues of Chilton Class Journal Publications

Sept. 15—Bus Show Issue—Operation & Maintenance.
Sept. 20—Bus Show Issue—Commercial Car Journal.
Oct. 1—Production and Factory Equipment Issue—Automotive Industries.
Nov. 4—Marketing Annual—Motor World Wholesale.

Salon, Automobile Salon, Inc., Hotel Drake, ChicagoJan. 28-Feb. 4
Salon, Automobile Salon, Inc., Hotel Biltmore, Los Angeles.....Feb. 11-18
Salon, Automobile Salon, Inc., Hotel Commodore, New York.....Nov. 27-Dec. 3
Salon, Automobile Salon, Inc., Hotel St. Francis, San Francisco, Feb. 25-March 3
Salon, Los Angeles Motor Car Dealers Association, Hotel Biltmore.....Oct. 18-21

San FranciscoJan. 28-Feb. 4
St. LouisFeb. 20-25
Syracuse, State Armory.....Feb. 6-11

*Will have special shop equipment exhibit.

CONVENTIONS

Automotive Equipment Association, Coliseum, ChicagoNov. 7-12
National Association of Finance Companies, Congress Hotel, Chicago, Nov. 14-15
National Automobile Dealers' Association, Ohio Council, Cleveland, Sept. 14-15
National Standard Parts Association, Hotel Hollenden, Cleveland, Nov. 14-18
National Tire Dealers Association, Brown Hotel, Louisville, Ky., Nov. 15-17
Pennsylvania Automotive Association, Johnstown, Pa.Sept. 19-20

S. A. E.

Chicago, October—National Transportation and Service Meeting.
New York, Jan. 12—Annual Dinner.
Detroit, Jan. 24-27—Annual Meeting.

RACES

Altoona, Pa.Sept. 5
Atlantic CitySept. 5
Charlotte, N. C.Sept. 19
DetroitSept. 10
Salem, N. H.Oct. 12
Syracuse, N. Y.Sept. 3

Draper to Head Car Washing Sales Firm

Blunderbus Auto System Will Now Be Marketed to Garage Trade

NEW YORK, Aug. 25—The Blunderbus automobile washing system, the outgrowth of a device already extensively sold to fleet owners and to automobile factories, will be marketed to the trade by a new organization, Blunderbus Auto Laundry Sales Co., which is now in process of formation and has temporary offices at 551 Fifth Avenue.

The manufacturers of the cleaning unit, Central Engineering & Sales Co. of St. Louis, are cooperating with H. D. Draper of New York, in the organization of the selling company. Mr. Draper will be president, and Edward W. Uhry, vice-president. Mr. Uhry is president of the St. Louis concern.

Fink-Dumont-White Co., New York, will continue to sell to fleet owners. As sold by this company, the Blunderbus system is used where a hot water and compressed air supply is available.

For marketing to the trade, a 30-hp. compressor has been added and an instantaneous heater of 10-gal. capacity for water supply has been developed by the American Radiator Co. The complete unit will be sold only for installation under the name "Blunderbus Auto Laundry."

Complete cleaning and drying of a car in 10 minutes is claimed for the system. A single nozzle delivers hot water at high pressure, but in an atomized spray so as not to injure the paint. By an adjustment the same nozzle produces a vacuum for the drying operation.

Bendix Co. Takes Over Leland-Gifford Patents

WORCESTER, MASS., Aug. 25—The Bendix Brake Co. has acquired rights covering the brake developments of the past five years evolved by the Leland-Gifford Co.

It is the intention of Bendix to include this in its extensive brake research program. Leland-Gifford engineers have already done a great deal of work on a self-energizing, or "Servo" type of brake, which is something like the well-known Bendix brake, and developed to a useful degree hydraulic, flexible cable and other controls, all of which fit directly into the Bendix research program.

Eldridge-Buick Names Four

SPOKANE, WASH., Aug. 24—Recent Buick dealer-appointments made by Eldridge-Buick Co. are Olso-Polworth Motor Co., Davenport, Wash.; C. E. Feltis, Mead, Wash.; R. S. Stenson, Fairfield, Wash.; and Lake City Motor Co., Coeur d'Alene, Idaho.



JIM MURRAY, a small dealer in the suburbs of Chicago, lost a sure sale the other day. And he doesn't know yet how it happened.



Jim had a good-looking second-hand car in his window. It was attractively priced. A prospect, who could well have afforded to purchase it for cash—and intended to buy it in just that way, stopped in one day to look it

over. Since there were only 159 miles registered on the odometer he asked the salesman why it had been traded in.

The salesman answered that it had been purchased by a chap who immediately discovered that it was too small for his family. It seemed he hadn't figured on taking along his mother-in-law. But his wife had. So the man had to have a larger car. The prospect, sympathetic, because he also was married, thought that he would buy the car.

The next day he came in to complete the sale. A friend was with him. Another salesman was on the floor.

"I should have liked to buy that car myself," said the friend, taking notice of the small mileage. "How did you happen to get it?"

"Well," explained the salesman, "a fellow bought this car on a Friday, took the comedienne of No. 7 Follies company out to a roadhouse to dinner on a Saturday, got sick of pep-to-maine poisoning on Sunday, died on Monday and was buried on Tuesday. Name of Muncie. You may have heard of him."

The prospect's friend shook his head. "I never did," he said sadly.

"Well," said the salesman, "that's why the car is for sale. His wife couldn't keep up the payments.

"And now," turning to the prospect, "do you want to pay cash or time payments?"

The prospect regarded him with a fishy eye. "I don't want to buy the car," he answered, turning away.



Tell all your salesmen
the same story and make
'em stick to it

Old Doc Turnover B. D.
(Business Doctor)

Forms Export Department

CLEVELAND, Aug. 23—Jordan Motor Car Co. has established an export department to handle increased demand from abroad. The new little custom Jordan is very well liked in the foreign field.

Car Salesmen Form Trade Association

New Group, Managed by Phil Banfield, Includes Agents and Distributors

WASHINGTON, Aug. 24—Preliminary steps for the organization of a National Automotive Salesmen's Association, with headquarters here, were taken this week by a group of nationally known automobile men, including agents, distributors and salesmen. A series of luncheon meetings were held and out of the exchange of ideas the purpose was announced.

The sponsors of the idea feel that such an organization will bring to the automotive salesmen of the country a tangible assistance, through a free interchange of plans, ideas and methods. The underlying thought, it was announced, is to be one of mutual cooperation and helpfulness, both to the salesman and also to his employer. Emphasis was stressed that there is no idea of a union in the general acceptance of that term.

The organization committee is composed of L. L. Britt, of the Mott Motor Co., Hupmobile distributor; Clark Allison, with the Horner Buick Co., and Phil Reilly, with Foss-Hughes Co., distributor of Pierce-Arrow. In order to further the plan, Philip E. Banfield, a veteran in the Washington automotive field, was appointed to take active management of the development of the organization.

Washington Willys' Dealers Have Conference at Seattle

SEATTLE, Aug. 23—Willys-Knight and Whippet dealers of the western half of Washington met at the Transport Motor Co. here recently to discuss the policies to be pursued during the coming year, beginning August 31. Fred Lawton, sales promotion manager of the Pacific Coast for the Willys-Overland factory, and W. E. Duncan, Northwest supervisor for the same company, were speakers at the meeting.

A later meeting for the Willys-Knight dealers in the eastern part of Washington will be held in Spokane.

Williams Takes New Building

HARTFORD, CONN., Aug. 24—F. W. Williams, Inc., distributor of Paige and Star has taken over the sales and service building of the Boulevard Chevrolet Co. and will remove from the present location just as soon as a new salesroom can be added to the plant.

Open Eastern Office

NEW YORK, Aug. 22—The Earle Gear & Machine Co., 4707 Stenton Ave., Philadelphia, announces the opening of a New York district office at 95 Liberty St. C. N. Walsh and George E. Barrett are in charge.

Ball Bearing Spring Shackle is Tested

Device Perfected After Four Years By Fafnir, Tried Out By Car Builders

NEW BRITAIN, Aug. 24—Seven car manufacturers are testing out ball bearing spring shackles which have been patented by the Fafnir Ball Bearing Co., according to Maurice W. Stanley, president of the company.

Numerous cars in this territory have been equipped with the ball bearing shackle and in tests the device has worked out perfectly. The new bearing is said to be noiseless and to require no lubrication. Ability to stand up under every conceivable service condition has been conclusively proved, officials of the company assert. It is anticipated that the ball bearing shackles will outlast the car.

The company has been developing the ball bearing shackle for the past four years.

It is the intention to place the bearing at the disposal of the car builders first and later to supply the general public.

Bendix Plane Service Permits Quick Delivery

DANBURY, CONN., Aug. 25—A Bendix brake inspector, calling on the Danbury Interurban Bus Co., decided to replace some of the brakes.

He wired the Bendix factory at South Bend, Ind. At 8 o'clock that night the parts were loaded into one of the three planes owned by the Bendix Brake Co. and rushed to New York. Arriving in New York the parts were shipped to Danbury by parcel post, and received just 12 hours after leaving the factory.

Because the Danbury flying field was not marked on the map carried by the Bendix pilot, the New York field was used, otherwise several extra hours would have been saved.

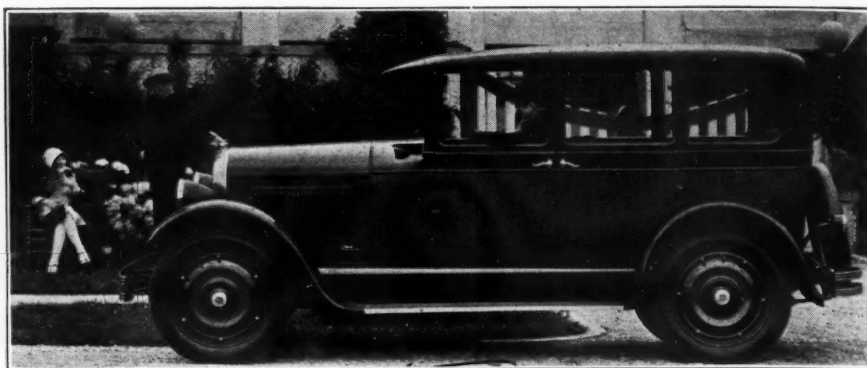
Essex Heads Hudson District

ST. LOUIS, MO., Aug. 25—L. W. Essex was recently appointed district supervisor of the Hudson Motor Car Co. with headquarters in St. Louis. He has named D. D. Boden as his assistant.

This district includes eastern Missouri and southern Illinois, for which the Hudson-Frampton Motor Car Co. is distributor and southwest Missouri for which the Olive Motor Car Co. of Springfield, Mo. is distributor. Essex and Boden co-operate with wholesale managers of these two companies in district work.

Builds Power Plant

DENVER, Aug. 22—Gates Rubber Co. has started erection of a \$500,000 power plant designed to furnish light, heat and power for its 21 factory units



Studebaker "Plush" Sedan

This new Studebaker Dictator "Plush" sedan, so named because of its luxurious plush upholstery, is priced at \$1,195. New duotone color combinations carried out in lustrous lacquer, accentuate the low lines of the full vision steel body

here. The plant is being built under the direction of Carl Ahlquist, chief engineer of the company, and will be ready for operation by Feb. 1, 1928.

Frank Terry Andrae

MILWAUKEE, Aug. 23—Frank Terry Andrae, president of the Andrae Auto Supply Co., Milwaukee, a leading wholesale interest of the northwest, was found dead in bed, of heart disease. He was 58 years of age. Mr. Andrae began his career in the bicycle days and in 1892-1894 was one of the country's most famous high-wheel race riders. His father, the late Julius Andrae, was a pioneer electrical dealer.

Felix Biegelaar

MILWAUKEE, Aug. 24—Felix Biegelaar, president and chief owner of the Milwaukee Cylinder Grinding Co., died recently of heart disease. He was 58 years of age and one of the pioneers in the automotive service business.

William P. Upham

MILWAUKEE, Aug. 25—William P. Upham, a pioneer in the merchandising of motor trucks, died at his home recently at the age of 61 years. He had been ill several weeks. Mr. Upham was a native of Boston and came to Milwaukee from Dallas, Tex., in 1915 to join the White Co. branch.

Bart J. Ruddle

MILWAUKEE, Aug. 22—Bart J. Ruddle, for 18 years secretary of the Milwaukee Automotive Dealers Association and manager of every Milwaukee automobile show, died Wednesday after an illness of several months. He was 63 years old. Mr. Ruddle served as the first secretary of the National Dealers Association.

Nelson-Wood Co. Builds

PEORIA, ILL., Aug. 23—Work has started on the \$50,000 garage for the Nelson-Wood Co., Hudson-Essex distributor and dealer. The new building will have 21,000 sq. ft. of floor space.

Chrysler in Record "Round Rim Run"

DETROIT, Aug. 24—A novel long distance automobile record and a remarkable exhibition of motor car stamina and durability were completed when Albert O. Bush and his relief driver and mechanic, Theodore Marsh, recently returned to their home city of Canton, Ohio, 21 days after they had left it in a 1924 Chrysler "70" touring car for a drive "Round the Rim" of the United States.

In the three weeks of their absence their itinerary had taken them through every boundary State of the Union and along the Atlantic, Gulf and Pacific coastlines. They added 13,456 miles to the 50,000 already registered on their cars' odometer, making an average of 636 miles a day.

The actual elapsed time for the trip, checked by Western Union, was 21 days, 4 hours and 6 minutes. Speed laws were observed at all times.

\$750,000 Hotel Garage for Birmingham, Ala.

BIRMINGHAM, ALA., Aug. 24—A contract has been let for the construction of a large "hotel garage" to cost \$750,000.

The garage when completed will house 550 cars. The building will be of white stone and will be six and one-half stories high. Warren Knight and Davis are architects for the building, which will be of the ramp type.

Superior and Kenosha Merge

KENOSHA, WIS., Aug. 24—The Superior Metal Products Co., Inc., and the Kenosha Plating Co., have effected a consolidation and are moving into a new and larger plant at 2219 Sixty-ninth Ave.

Marshall Chevrolet Moves

MARSHALL, N. C., Aug. 25—The Marshall Chevrolet Co., this city's new automobile dealer, has moved into its new home on Main Street. Thomas Frisby is president of the company.

Chevrolet Extending Car Junking Plan

Allowance of 1-in-10 on Any Make of Car May Be Had By Dealers

DETROIT, Aug. 25—Chevrolet Motor Co. has just extended its junking plan to cover all makes of cars in all parts of the country, it was learned here today. Hitherto restricted to Chevrolet cars, Chevrolet dealers may now obtain factory allowances for any makes of cars they desire to scrap, within the limits set by the plan.

In its earlier form the plan has been in operation for about eight months, and the decision to extend it is considered evidence that the executives of the Chevrolet company have been greatly pleased by the preliminary working of the idea.

Since the original Chevrolet junking plan was made known to the industry through this publication, there has been general interest in the policy, which is acknowledged to be one of the most radical steps ever taken by an automobile factory for the relief of its dealers' used car problems. The pioneering courage of W. S. Knudsen, president of the company, and of R. H. Grant, its forceful vice-president in charge of sales, has been widely admired even by those who professed skepticism regarding the merits of the junking program.

In its newest form, the plan provides for the junking of the one used car of any make for every 10 new cars sold. The dealer, of course, may junk more cars but he can only receive factory allowances on the one to 10 ratio. The factory allows him \$50 for every Chevrolet junked under the plan and \$35 for other makes of cars.

(Turn to page 20, please)

Southern Texas Olds Dealers at Houston

HOUSTON, TEX., Aug. 22—More than a score of Oldsmobile dealers in various sections of south and southeast Texas attended a sales and service conference here a few days ago. The Oldsmobile dealers in this section met the branch factory officials of Dallas and went over an aggressive sales campaign which will be pursued for the remainder of the year.

Dallas Show Oct. 8

DALLAS, TEX., Aug. 23—The Dallas automobile show will be held Oct. 8 to 23, in the automobile building at the Texas state fair and exposition.

The attendance during the 16-day period ranges from four to 600,000.

Airkool Moves Into \$125,000 Plant

JACKSONVILLE, FLA., Aug. 22—Airkool Spark Plug Corp., organized and incorporated at Jacksonville some few months ago, has completed the initial unit of its new plant here and

Prize-Winning Chevrolet Saleswoman Out-Shines Her Masculine Competitors

SIOUX FALLS, S. D., Aug. 22—Mrs. Pearl Bollig, of this city, the first saleswoman in the United States to achieve the honor of membership in the



Mrs. Pearl Bollig, star Chevrolet saleswoman and newest 72-car club member

72-Car Club, of the Chevrolet Motor Co., a star salesman's organization, has just been awarded her second year's membership, marking her as one of the foremost sales experts among the company's 14,000 salesmen. This record means that since Aug. 1, 1926, Mrs. Bollig—with a home and two growing boys to look after—sold 72 Chevrolets

is now engaged in the installation of machinery and equipment for the manufacture of spark plugs, production to begin at a comparatively early date, it is announced by Hugh C. Duffy, vice-president and chief engineer of the company.

The initial unit represents an investment of about \$125,000, including the equipment, and will have an annual capacity of approximately 7,500,000 spark plugs.

1,756,000 In Great Britain

WASHINGTON, Aug. 23—Automotive registration in Great Britain, as of June 1, totaled 1,756,000 vehicles, and represented an increase of 176,000 for the year, according to cable to the Department of Commerce from Trade Commissioner W. M. Park at London.

Organize Hildebrand Co.

ORANGEBURG, S. C., Aug. 25—The Hildebrand Motor Co. has been organized and incorporated here to engage in a general automobile business. Officers are: M. R. Zeigler, president; J. B. Hildebrand, vice-president, secretary and treasurer.

Larson Opens New Showroom

MARINETTE, WIS., Aug. 24—The Larson Motor Co. has opened a new garage and show room at Madison and Maple Aves.

and has duplicated her sales performance of the year previous, which first gave her a much-coveted place in the honor organization of the company.

Mrs. Bollig's career as a Chevrolet saleswoman began with the purchase of a Chevrolet sedan for her personal use, back in 1923.

"I liked the car, and so did my friends," said Mrs. Bollig. "Then I thought I should be able to please others with the car, because of my own pleasure in its ownership. I applied for a position with a Sioux Falls Chevrolet dealer and assisted in the Chevrolet booth during the auto show that year. I interested many school teachers, who found it a novel experience probably to learn how to drive a car from another woman, and many business men bought cars from me. This was the first sales experience I have ever had and my enthusiasm for selling continued.

"Any woman who starts out to sell automobiles will succeed if she so conducts herself as to command the respect and confidence of everyone in her community. It is no job for a woman seeking excitement or a lark. It's hard work. But I like it."

Mrs. Bollig will be an honored guest at a banquet of members of the Chevrolet 72-Car Club in this district.

Graham Optimistic On Trade Future

MILWAUKEE, Aug. 23—Robert C. Graham, president of the Paige-Detroit Motor Car Co., described the automotive outlook for the entire United States in an optimistic way while in this city on his tour of survey of business conditions and be present at a special conference of Paige dealers in Wisconsin and Upper Michigan at the Paige Wisconsin Co. headquarters.

He predicted a big improvement during the last half over the first six months.

Rene Fonck Building Paris Flight Plane

NEW YORK, Aug. 22—A new Sikorsky biplane, in which Capt. Rene Fonck plans to fly to Paris early next month, is being assembled at Curtiss Field today.

The plane was constructed at the College Point plant of the Sikorsky Engineering Corp. It has a larger carrying capacity than the ill-fated S-35 which crashed last fall.

Form Hoopeston Sales Co.

HOOPESTON, ILL., Aug. 17—The Hoopeston Sales & Service Co. has been incorporated with a capital of \$40,000.

Am. Bosch Co. Gets Contract From Ford

Value Cannot Yet be Reduced to Dollars and Cents, Says Metcalf

SPRINGFIELD, Aug. 25 — The American Bosch Magneto Co. had closed a contract to furnish a substantial part of the ignition equipment for the new Ford cars. Morris Metcalf, vice-president, said the value of the contract cannot yet be reduced to dollars owing to the contingency upon quantity manufacture and sale of Ford cars, but stated that the contract was an unusually large one, even for Bosch, and should substantially increase its earnings.

He said that the initial layout for the additional equipment to manufacture the ignition units would be very heavy, and that the increased business will not be reflected in the added earnings for some time to come. Owing to the advantage of placing the cars in quantity production, however, the Bosch company expects to start manufacturing units immediately.

Business and industrial circles are much interested in seeking to learn as to whether the securing of the Ford contract would mean the dropping of the radio activity in which the Bosch company has invested much time and money, or whether the radio business would be carried on, but relegated to a side business.

The fact that the company was preparing to change over much of its equipment, it was pointed out, indicated that the radio business was to become at least a much less important factor. If, as declared, the contract is an unusually large one, it is assumed that whatever happens to the radio branch of the Bosch business the plant will be brought to capacity production on the Ford product.

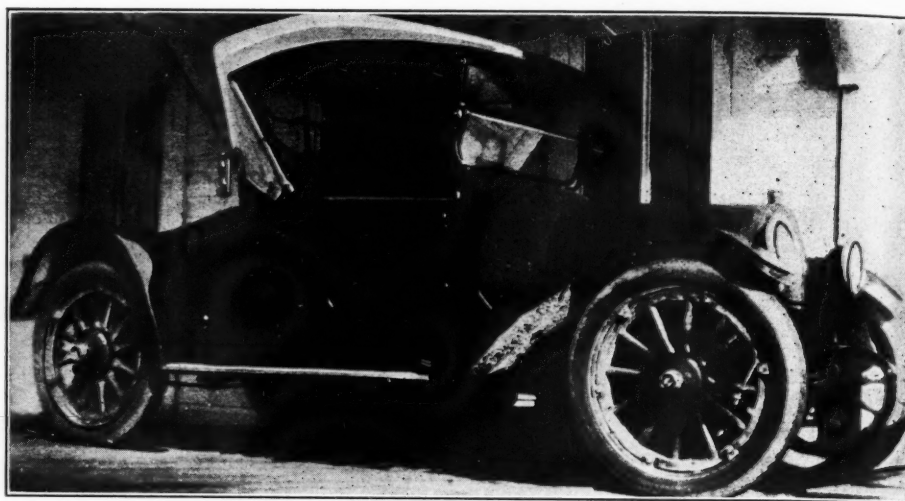
1000 Car Ramp Garage to Cost Half Million

COLUMBUS, OHIO, Aug. 22—The second large ramp garage, to be located in the down-town business section, will be started soon by the Columbus Merchants Garage Co., a local concern, backed by leading retailers of Columbus.

The contract has been awarded for a six-story structure, 125 x 187 ft., with foundations designed to carry a number of additional stories. It will be of steel, concrete and brick construction and will care for 800 cars on the six floors besides 200 additional cars on the roof. The cost will be about \$500,000.

Boston Kissel Co. Moves

BOSTON, Aug. 22—The Kissel Motor Car Co. of New England has just moved from 870 Commonwealth Ave. to another location on the other side of the



Twelve Years Old-and More

More than 12 years ago this Oldsmobile roadster came off the production line, made its "bow" and was sold down the river, to E. E. Warne, of Melbourne, Fla. The car is affectionately known as "Nels."

thoroughfare at 1033. The rear will be used for a used car department, and the service station will be housed in a new building at 90 Cummington St.

Seeking More Light

HARTFORD, CONN., Aug. 24—Members of the lighting committee of the Eastern Conference of Motor Vehicle Registrars are to meet here tomorrow to resume their deliberations over headlights, equipment and adjustments. It promises to be an important meeting. It is understood that there will be some discussion over the use of a single and double filament adjustments as some state officials favor one type exclusively and others believe in the use of both.

This meeting will bring together some of the men who read papers at the S.A.E. convention at French Lick Springs in May, who were on opposite sides of the fence on the question.

Prest-O-Lite Builds Branch

DALLAS, TEX., Aug. 25—The Prest-O-Lite Co. of New York is erecting a new building to house its southwestern branch. The site of the building is on a 12-acre tract on Forrest Ave. The building will be completed at a cost of \$200,000.

Found Hartsville Sales

HARTSVILLE, S. C., Aug. 23—The Hartsville Sales Co. has been chartered to buy, sell and repair automobiles and to sell gasoline, oil and accessories. Officers are: W. D. Boykin, president; C. G. Timberlake, vice-president; C. A. Wilson, secretary, and C. A. Manship, treasurer.

Gleason Motor Co. Moves

BOSTON, Aug. 23—The Gleason Motor Car Co., associate dealer in the Hudson-Essex line, has moved to 1031 Commonwealth Ave. from its old location at 872 on the same street.

Acceptance Corp's Net Is \$3,197,711

NEW YORK, Aug. 23—General Motors Acceptance Corp. reports net income of \$3,197,711 after charges, for the six months ended June 30. This compares with \$2,613,823 in the same period of 1926.

Six months' net profits are equal to \$9.14 on 350,000 shares of capital stock outstanding, as against \$13.76 a share on 100,000 capital shares in the first half of 1926.

Taxi Liability Premiums Not Payable Until Jan. 1

NEW YORK, Aug. 23—At the request of the taxicab insurance companies, the State Superintendent of Insurance, James A. Beha, has agreed to defer his recent order that two months' premiums in advance for liability insurance should be collected beginning Sept. 1. It was pointed out that this came too close to the dull summer months of the taxicab business, which have increased the depression already felt, so Mr. Beha agreed to changing the date to Jan. 1, 1928. The higher insurance schedules previously announced will, however, go into effect Sept. 1.

Opens Two Branches

TACOMA, WASH., Aug. 22—Mueller-Harkins Co., Buick distributor in Pierce County, now has a complete sales and service station at Puyallup, Wash. and have also opened a store at 5634 South Union Ave., South Tacoma.

Coleman With Bacon Co.

JACKSONVILLE, FLA., Aug. 23—D. H. Coleman, widely known in automotive circles, has joined the sales staff of the Bacon Motors Co., Hudson and Essex dealers.

Gas Price War Seen In Royal-Dutch Act

\$5,000,000 Invested by Subsidiary of English Firm Causes Speculation

CLEVELAND, Aug. 25—An investment of \$5,000,000 by the Royal Dutch-Shell Oil Co. in a gigantic plant here has caused oil men to speculate on a gasoline price war in the near future. Plans of the Shell interests, American subsidiary of the English-Dutch oil combine, provide for a \$3,000,000 storage and distribution plant on the Cuyahoga River.

It is planned to build up a system of retail distributing stations in the Cleveland district at an initial cost of \$2,000,000. Oil men see in the plans for a network of stations, the probability of a price war with the Standard Oil Co. Shell interests have cut prevailing Standard oil prices in other cities.

Providence Tire Dealers Form Trade Association

PROVIDENCE, R. I., Aug. 22—Automobile tire dealers of this city have organized the Providence Tire Dealers' Association for fraternal purposes and to exchange ideas to a uniformity in practices and benefits that come from such cooperation. Twenty-nine dealers out of about 40 have signed the roll and this does not include the shops that are accepted representatives of single standard makes. It is expected that there will be 50 members enrolled shortly. A new set of by-laws has been adopted. It incorporates the general principles of good advertising and pledges the avoidance of extravagant claims. After a few meetings the following officers were chosen: S. B. Mason, President; Harry R. Rosen, Vice-President; Alfred Corp, Treasurer; George Gienty, Secretary.

McDarby of Auburn at K. C.

KANSAS CITY, MO., Aug. 23—N. McDarby, general sales manager of the Auburn factory organization, has been in Kansas City for a conference with H. S. Lowe, president of Auburn Distributors, Inc. The Auburn organization here has been expanding. Nine new dealers in western Missouri and eastern Kansas recently have been named.

W. H. Dohrer, formerly manager of the Hupmobile branch in Wichita, Kan., has been made manager of the wholesale department of Auburn Distributors, Inc.

Organize Pickens Auto Co.

PANAMA CITY, FLA., Aug. 23—The Pickens Auto Supply Co. has been incorporated here with a capital stock of \$5,000. The board of directors is composed of L. F. Pickens, B. F. Pickens, R. A. Pickens and Monte Pickens.

CLOSE UPS AND LOW DOWNS

By SAM U. L. SPARKS

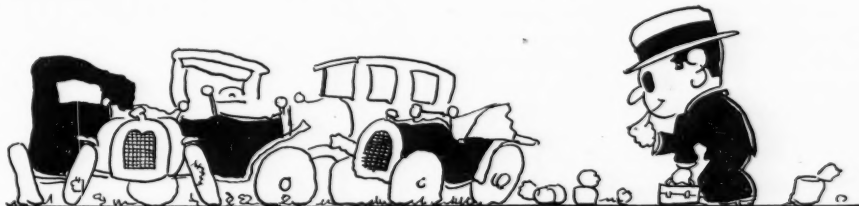
WORDS which is on the tip of your tongue is libel to fall off when they hadn't ought to.

One of my favorite habits is to use my ears and eyes more than I do my tongue, because most generally you can learn more by looking and listening than you can by talking.

Well, anyhow, I am now giving the people of Sparks Corners a vacation from being sold a Halfpast Six during the next two weeks, and I am out to prove some fish story lies, and maybe make up a coupla good ones of my own.

I notice in some of the big cities as I pass along the highways and byways that there are considerable of used cars parked in lots waiting for someone to take them away, and at some places they will pay you to come and get them.

In one of the Sunday newspapers I seen a reproduction of a check, life size, which it read, "Pay the Sum of \$50 and 00 cts. to the order of Bearer, on a used car of \$300.00 or over. The above check will apply as cash on any used automobile selling for three hundred (\$300) or more during August 7th, 8th, 9th and 10th."



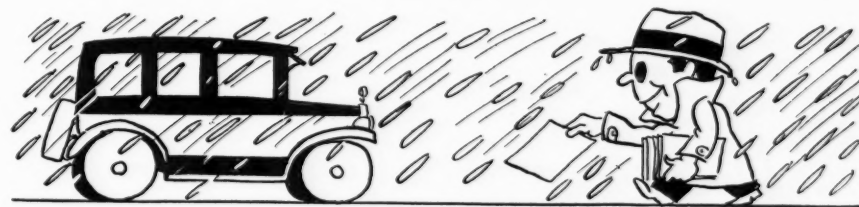
Looks like a good idea. A lotta people like to get something for nothing, and they are libel to think, if I can get \$50 off on buying a car here, what a dumb-bell I would be to buy it somewheres else, or words to that effect.

A guy came to my garage before I left, to buy a cheap used car, and he gave me an idea which had ought to be worth something to some of the big-city dealers.

"What I want," says he, "is a second-hand coop. (He gave me the name, but this colyum gives no free advertising, so I will only hint that it was a four-letter word beginning with F and ending with 'd,' and let you try and guess it.)

"I bought me one of your Halfpast Sixes a coupla weeks ago," says this guy, "and I drive it to work every day. They ain't no room in the garage at the factory, so I gotta park it out in the lot. I done that last winter with another car, and it don't do them no good being parked outside winter and summer, so I have decided to get me any kind of a second-hand car for about \$100 that will run, just to go to and from work."

Well, as you maybe suspect, I accommodated this lad. I sold him one which runs. Not without bucking, exactly. And maybe it will choose not to run in 1928. I could see that this was one result of my campaign for what the big-city



dealers calls "multiple ownership." No doubt in and additional to this lad's not wanting to leave his car parked outside, his bitter half has been telling him to park it at home where she could use it whilst it would otherwise be idle.

Seems to me if I was doing business in a big city, where you see hundreds of cars parked in yards outside factories, I would have me a handbill printed, something like this:

SAVE YOUR CAR

Don't ruin your good car by parking it all day in the open. You will save money by getting a small used car, just to drive to work. Leave your good car at home and keep it looking good, or let your family get some use out of it while you are at work. We have a large number of used cars from which to make a selection. Some as low as \$95 or \$100. Come in and look them over.

I would take these handbills and drop them in every respectable looking car in all the parking yards alongside of factories. I give you this hint free which you would have to pay maybe a fancy price for it if somebody else was your advertising and merchandising counselor in the stead of yours truly.

Reports Favorably on Fuel Substitute

Newspaper Man Enthusiastic
Over Newly Discovered
Power Source

NEW YORK, Aug. 25—A substitute for gasoline, safe, cheap, compact, without odor, is alleged to have been discovered by a New York chemist. The secretary of the National Cycling Association, who is also automobile editor of the *Mail & Express*, vouches for a part of the story.

He reports that he "examined and operated the machine which has served as a working model for the new power. It is rather a crude affair, which makes its operation even more creditable.

"A carriage body has been placed on the frame of an ordinary quadricycle, to which is attached a Canada gasoline motor, said to be of 2½ hp. The important factor in the carriage is a round tank of tin about 15 in. long and 8 in. in diameter, carried in the body just back of the seat. It contains chemicals for creating the gas.

"From the end of the tank a ¾-in. pipe runs along the right side of the body to the dashboard, where there is a valve to regulate the flow of gas and an opening which draws in the air. The pipe runs back, inside the body, to the motor. An air siphon is attached to the left end of the gas reservoir which draws in the air that acts on the chemicals. The engine is turned over by the pulling of a lever from the seat, similar to the method employed on all gasoline carriages. The ignition is governed by a small sliding rubber block in the steering rod, enabling the operator to increase or decrease his speed by advancing or retarding the spark.

"The speed can also be regulated by operating the valve of the gas supply pipe. Except for the absence of any odor, the machine in operation appears the same as any."

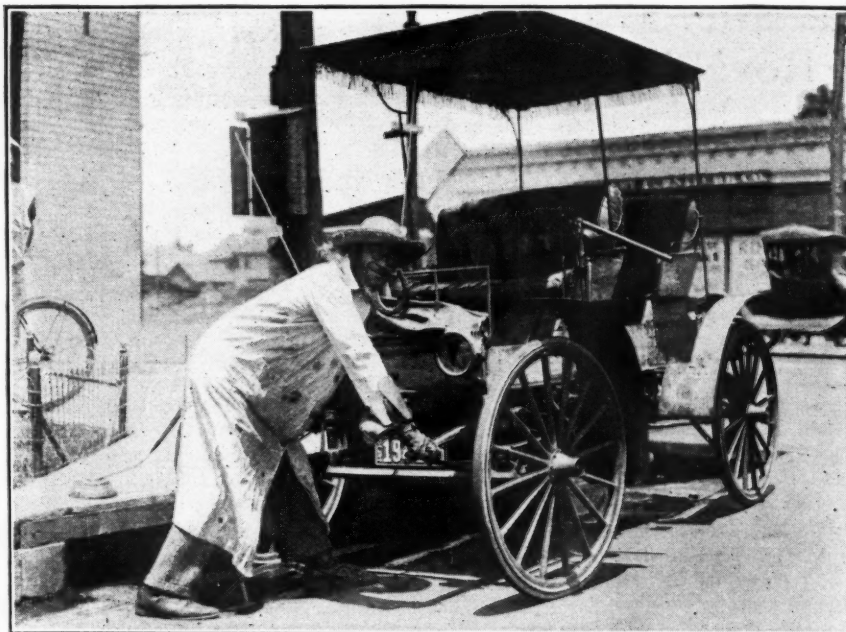
Mr. Russel says that "hydro-carbon and chemicals" form the basis of his discovery and that the admission of air thereto is all that is necessary. Half a cent per horsepower-hour is his estimator of the cost and 150 miles the capability of the 8x15 tank.—From *MOTOR AGE*, August 28, 1902, twenty-five years ago.

Sullivan at Pontiac Plant

CHARLOTTE, N. C., Aug. 23—W. A. Sullivan, local branch manager for the Oakland Motor Car Co. for several years, was transferred to the Pontiac plant, at Pontiac, Mich. W. T. Minor, of Greensboro, N. C., field representative of Durant Motors for several years, has succeeded Mr. Sullivan.

Thieves Get \$5,000

DENVER, Aug. 22—Cash and securities totaling about \$5,000 were



Produces Low-Priced Fuel

The illustration shows Henry Weatherby and his new "Gaswagon" (see story at left), which he says is operated by a secret blend of chemicals. It is claimed that a still under the back seat actually produces the fuel, a low-grade of moonshine, and that it is so efficient that Hen. has to stop the car every few miles and bail out the surplus. Hen. is evidently superstitious, as witness the horse-shoe on the front of the dash. The machine is equipped with an emergency brake of novel design in the form of a horse-weight (see west of Mr. Weatherby's left-hand hip pocket)

stolen by burglars who bored open the safe in the showrooms of the Cullen-Thompson Motor Co., 1000 Broadway, this morning. This firm distributes Chrysler cars.

National Bearing Co. Moves

SAN FRANCISCO, Aug. 21—National Motor Bearing Co. has moved into a new factory building at 460-470 Natoma St.

Chevrolet Extending Its Car Junking Allowance

(Continued from page 17)

The junking is done at stated periods under supervision of a member of the Chevrolet field force, and outright, destruction of the car is required, as the Chevrolet company wants to make sure the "junker" does not again find its way back into service and furthermore does not want any of parts to be used for replacement.

The plan is designed, therefore, to help Chevrolet dealers get rid of used cars that are unprofitable to merchant and uneconomical to operate yet which persist in coming in on trades. Dealers lose money on such cars and salesmen do like to handle them because of the small commission involved in a sale. Therefore, says the Chevrolet company remove them entirely from the market.

The Chevrolet company announces the creation of a new zone sales office, the twentieth to be opened since 1925, and the forty-third now established in the United States. The new zone is located at Portland, Me.

Cannot Make License Applicant Take Test

WILMINGTON, DEL., Aug. 24—Secretary of State Charles H. Grantland of Delaware, has decided that the state motor bureau, of which he is the head, cannot require applicants for motor license to demonstrate that they can operate a car as a condition for the granting of a license. The Delaware Safety Council had appealed to Mr. Grantland to require preliminary tests of persons making their first application for operators' licenses. Secretary Grantland has promised to do what he can to eliminate as many incompetents as possible. The law now requires paid drivers to undergo preliminary examinations.

Bill Neal Sales Manager

ST. LOUIS, Aug. 23—William H. Neal has been appointed sales manager of the Auburn-St. Louis Co., the St. Louis branch of the Auburn Automobile Co., which recently succeeded the Mound City Automobile Co. as distributor of Auburn cars in the St. Louis district.

Burrows Buys Out Bellinger

SPOKANE, WASH., Aug. 23—L. J. Burrows, since January 1, 1926, associated with L. G. Bellinger in the Bellinger-Burrows, Inc., associate dealers in Oakland-Pontiac, has purchased the interest of Mr. Bellinger in the concern and will continue the dealership under the name of L. J. Burrows, Inc.

Herbert Buckman Gives Show Plans

Many Cities Besides Chicago
and New York Will
Have Exhibits

CLEVELAND, Aug. 23—An announcement from the office of Herbert Buckman, who is in charge of all promotion and details of shop equipment exhibits to be held in connection with the 1928 automobile shows, states that the New York, Chicago and Boston shows are to be handled directly by the manufacturers through Neal G. Adair, head of the show department of the Motor & Accessory Manufacturers Association. A. V. Comings, who directed the mail promotion campaign in behalf of the previous exhibits, will again be active in the management of the show.

Martin Goldman, head of the shop equipment section of the Automotive Equipment Association, is looking after jobber contacts, conduct of trade meetings and similar features. H. R. Cobleigh, secretary of service for the National Automobile Chamber of Commerce, who initiated equipment exhibits and has been an important factor in their development, is again enrolled for service.

George W. Fleming of the Fleming Machine Co., Worcester, Mass., has been designated treasurer of the fund to which manufacturers are contributing.

In addition to the national shows in which the manufacturers take over the exhibits directly, the following cities have already been listed for inclusion in the campaign which the manufacturers are directing: Philadelphia, Baltimore, Detroit, Cleveland, Milwaukee, St. Louis, Kansas City, Louisville, Los Angeles, San Francisco and Tampa.

The list is not complete as plans may be formulated and approved for other cities.

The program has been enthusiastically approved by manufacturers in the shop equipment group for a definitely developed and directed campaign.

Opens 400 Car Garage

BALTIMORE, MD., Aug. 22—The Downtown Garage, with a capacity of more than 400 cars, has been opened at 208 Water St., this city, in the heart of the congested section, by the Motoramp Garages of America, Inc., which operates garages in several other cities. This is the first garage of its type in the state. D. E. Irwin is manager. The building has 14 levels.

Convention Dates Changed

LONGVIEW, WASH., Aug. 23—Convention dates for the Washington State Good Roads Association to be held here have been changed to September 30 and October 1, according to Clyde L. Morris, chairman.

Jest—A Bit Cynical

By S. G. SWIFT

*B*ILL KENYON, of Kenyon's Garage, Milwaukee, the third MOTOR AGE reader to write something of interest for the column this week—our average is gaining—tells us of a grocer in his section of the city who came to his service station with a request for 10 cents worth of transmission band rivets. Bill asked him what he wanted to use them for and the man explained that the transmission bands of his Ford had become glazed on one side and he was turning them over. That, according to Bill's figures, meant that this customer was willing to do \$5 worth of work to save 80 cents. "I'm strong for 'turnover,'" writes Bill, "but there's no profit in that kind."

* * * *

MY battery man—which is my autocratic way of referring to the chap who cares for my automobile battery—is through charging batteries and advised me to go elsewhere. He is "going to take on a line of radio or do something or other" that will bring him in a living. He's all washed up on the battery business. It costs him nearly a dollar to charge one and that's all the customer will pay for the job. I don't blame him; a dollar is entirely too small an amount for the work involved and the man who set the price in the first place was no merchandiser. But it seems that there are all kinds of men in this business, just as there are all kinds in other businesses. The man who now takes care of my battery is located across the street from the other fellow. He says he wants all the battery charging that he can get. He admits that judged strictly from a business viewpoint there isn't much profit from servicing batteries at the prevailing price. "But," he says, "the contact sure gives me a swell chance to sell new batteries and my sales have increased 25 per cent since my competitor quit servicing them." Which reminds me of an old quotation from some forgotten source: "One sees but a cabin beyond the lea, the other the city that is to be."

* * * *

THERE is one type of man who views every act of the manufacturer with suspicion and sees in each new idea that is designed to aid him, something that will be of benefit to none but the manufacturer. Recently, such a chap showed me a small-sized barrel filled with window displays, dealer helps and similar expensive promotion matter sent to him by different manufacturers with whom he does business. "Let 'em do their own advertising," was the way he explained his action in thus disposing of the accumulation. "I got enough to do to tend to my own business."

This, dear reader, actually happened. I am sometimes filled with a great and nearly uncontrollable longing to get fellows like this one singing into the small end of a megaphone so that I can throw an egg into the big end.

* * * *

SWEDEN, always to be depended on for keeping a few paces ahead of most of the European countries, has recently founded an institute that will be devoted in the main to research with a view to producing more economical carburetion. The entire automotive industry of Sweden will benefit from this soundly conceived plan and it appears to me that we of these United States—where automobiles really count—could do something along these lines with much profit to all concerned.

* * * *

I NOTE, with something akin to grave unrest, an increasing amount of what I term destructive consumer advertising. And, I can't understand why, in this enlightened age, such things should be. What good does it do a manufacturer, of tooth paste, for instance, to say that his product is good, will do remarkable things, etc., and then spoil a good effort by throwing a few innuendoes as to the inefficacy of the tooth paste manufactured by every last one of his competitors?

Disregarding any question of the ethics involved, it is quite apparent that the tooth paste industry—if that's the way to speak of it—cannot benefit by such controversial advertising for the reason that all advertising that is not constructive must to an extent, be destructive, through the negative effect that it produces in the mind of the prospective purchaser. Certainly potential sales are lost when the product of one manufacturer is attacked, however subtly, by another manufacturer in the same line. "No wine is bad", said a famous savant, "though some may be better than others."

* * * *

*I*F we live—if that is what our continued state of existence may be called—we hope to take in the stock car races at Atlantic City on Labor Day. We don't want to get a reputation as a "gimme," but we hope that the time will come when we can see a stock car road race; then we shall be entirely satisfied.

Shipments of Tires and Tubes Increase

Inventories Also Show Slight Gains Due to Acceleration of Production

NEW YORK, Aug. 23—Tire and tube shipments gained in June but due to acceleration of production in balloon casings and tubes there was a moderate increase in inventories, according to the Rubber Association of America, Inc. As, in the high pressure lines, shipments exceeded production, inventories for all types of casings and tubes showed little variation.

Comparisons follow:

Pneumatic Casings—All Types			
	Inventory	Production	Shipments
June, 1926..	8,976,123	4,066,416	4,292,836
May, 1927..	9,346,581	4,613,945	4,243,078
June, 1927..	9,346,923	4,659,195	4,690,393
Inner Tubes—All Types			
June, 1926..	15,181,992	4,627,800	5,173,818
May, 1927..	13,792,496	5,055,018	4,605,277
June, 1927..	13,393,897	4,729,830	5,124,246
Balloon Casings			
June, 1926..	3,348,039	2,197,580	1,895,997
May, 1927..	4,106,840	2,708,350	2,337,572
June, 1927..	4,467,148	2,744,363	2,374,345
Balloon Inner Tubes			
June, 1926..	4,844,588	2,465,646	1,993,353
May, 1927..	5,830,272	2,907,364	2,342,781
June, 1927..	6,256,281	2,794,164	2,328,152
High Pressure Cord Casings			
June, 1926..	4,503,647	1,789,752	2,138,057
May, 1927..	4,685,780	1,867,667	1,805,930
June, 1927..	4,407,054	1,884,149	2,202,930
High Pressure Inner Tubes			
June, 1926..	10,337,404	2,162,154	3,180,465
May, 1927..	7,962,224	2,145,654	2,262,496
June, 1927..	7,137,616	1,935,666	2,796,094

Internal Combustion Car Engine Patented

SAN FRANCISCO, Aug. 23—Paul Marchetti, of San Francisco, has been granted a patent on an internal combustion engine which he claims is equally adaptable to passenger cars, trucks, airplanes or marine service. Revolutionary features are incorporated in the new engine, which has just completed a 400-hour continuous run on a block. There is no crankshaft, no timing gears, no babbitt bearings, bushings, springs or guides, with other corresponding parts eliminated. Piston travel is accomplished through a system of cams and roller bearings.

Will Increase Sales

SPOKANE, WASH., Aug. 25—Willys-Knight and Whippet dealers in the Inland Empire, including eastern Washington, northern Idaho and western Montana, have signed contracts to sell 25 per cent more cars during the coming year than during the current year.

Jump in Gas Tax Fees in N.H.
CONCORD, N. H., Aug. 22—State Treasurer Harry E. Chamberlain has



An Anti-Aircraft Searchlight

With all the good things that have recently appeared in favor of airplanes, this photo of a powerful anti-aircraft searchlight, mounted on a Cadillac chassis for the U. S. Army, comes as somewhat of a shock.

announced that for the month of June \$144,558.73 was collected as the gasoline tax from the motorists. During the same month last year the sum was only \$83,314.47. In 1926 New Hampshire was working under a two-cent gasoline tax while this year the tax has been increased to three cents.

Car Industry Causes New Currency Size

WASHINGTON, Aug. 22—Effective July 1, 1928, all issues of bank notes, both green and yellow backs, will be one-third smaller than the present size of the filthy lucre, the Treasury Department announces.

The reason assigned by the department is that because of the large number of garages and service stations throughout the country, and the large amount of money that goes through the oil industry's employees' hands, which are invariably greasy, other paper money does not stand the necessary wear and tear. By making the notes 1/3 smaller the department believes that it can increase the life of such bills.

Experiments made by the Treasury Department show that every 18 times that a bill changes hands, it passes through hands of a garageman or oil station employee one time.

Reo Organizes Half Million Dollar Club

LANSING, Aug. 22—Reo Motor Car Co. is gathering the names of all salesmen who have sold \$500,000 worth of Reo product, preparatory to organizing a "Half-Million Dollar" Club.

W. C. Blair, who has been with The Linscott Motor Co., Reo dealer at Boston, since 1915, has sold more than \$1,500,000 worth of Speed Wagons alone, according to announcement by his sales manager. Other Reo salesmen who have passed the \$500,000 mark are E. C. Gavitt, Wichita, Kansas, and W. C. Elliott, another Boston salesman.

Moon Organization Gains 95 Dealers Since Jan. 1

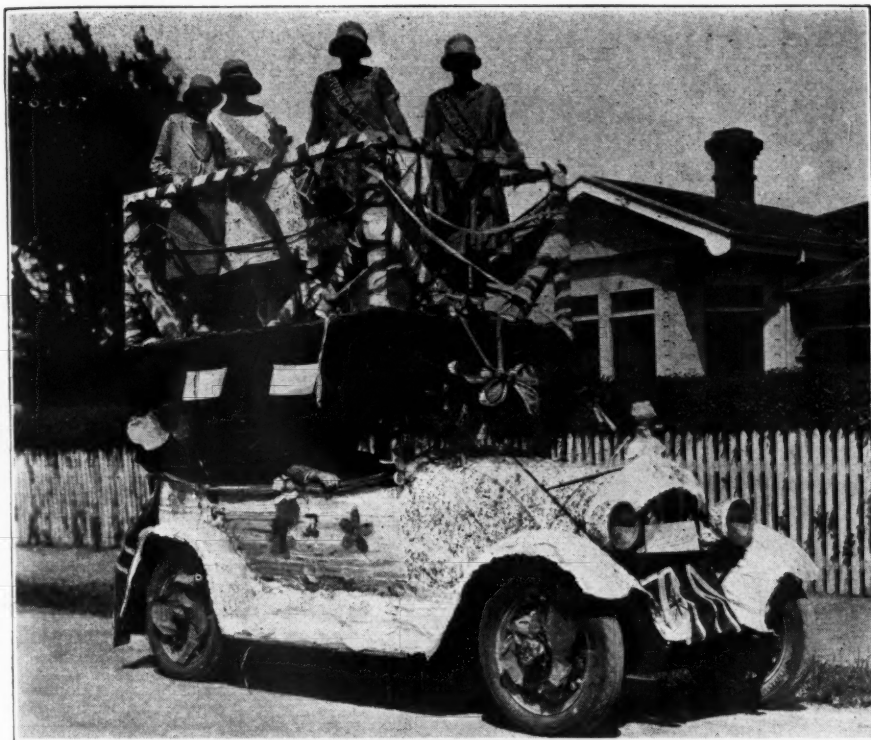
ST. LOUIS, Aug. 24—The rapid growth of the Moon distributor and dealer organization is evidenced by the fact that since Jan. 1, 78 automobile merchandisers in the United States have enlisted under the Moon banner.

Racine Radiator to Move

RACINE, WIS., Aug. 23—Racine Radiator Co., manufacturers of heavy duty radiators for industrial and automotive engines, will move to a new and larger plant at Milwaukee, Sept. 1. The company reports a very satisfactory increase in the first six months of 1927 as compared with the same period in 1926.

Sells Oakland Line

SPRINGFIELD, MASS., Aug. 22—Louis A. Brady, Inc., has been appointed an associate dealer for the Oakland-Pontiac line here.



All Dolled Up and Somewhere to Go

Also, something to go there in. You'd never guess that the car in which these sweet New Zealand girls are riding is a Studebaker, but it is—all dressed up to welcome the Prince of Wales

Cadillac and LaSalle Win Foreign Honors

DETROIT, Aug. 23—At an international automobile contest for efficiency and beauty of appearance held recently in Berlin, Germany, with 62 entries from many countries, first prize was awarded to a Cadillac special sport phaeton and second prize to the LaSalle. In a similar contest held in Vienna in a field of 100 contestants, second prize also went to the Cadillac.

The honors were doubly valuable because they were awarded to American cars in rivalry with European cars in contests held in European cities.

Celebrate Their Sixtieth Wedding Anniversary

MILWAUKEE, Aug. 25—Mr. and Mrs. Frank R. Ellis have just celebrated their sixtieth wedding anniversary. Mr. Ellis is president of Shadbolt & Boyd Co., a wholesaler and jobber of automotive equipment, materials and supplies. He has been associated with the company for 45 years.

Mackie General Manager

MINNEAPOLIS, Aug. 24—J. H. W. Mackie has been appointed general manager of the factory branch of the Paige Motor Car Co.

Appointed Velie Distributor

LOS ANGELES, Aug. 18—McKemy Smith and Edwin M. Stanton, operating under the name of Smith & Stanton,

have been appointed southern California distributor for Velie.

Shelor Motor Co. Builds

HOUSTON, TEX., Aug. 23—The Shelor Motor Co., Dodge dealer, is to have a new home in November. It will be erected at a cost of \$130,000.

Progress Backward in Tire Simplifying

AKRON, Aug. 23—The agitators for simplification of tire sizes for automobiles may be interested to know that since the last report on sizes was made the number now in use has increased to 71. Thirty-four of them are balloon sizes and 37 are high-pressure ratings, according to a General Tire & Rubber Co. bulletin.

Some time ago it was fondly hoped that the number required for modern motordom might be reduced to ten or a dozen, thus making things much less complicated for the tire manufacturer, the tire dealer and the tire user, but progress in simplification has been in reverse. It is even said that there will be 17 in. wheels of five and six-inch cross sections on new cars soon to be announced.

G.M.C. Maintains Sales Gain Ratio

July Increase to Users Is 35 Per Cent Ahead of Last Year's Total

NEW YORK, Aug. 22—General Motors Corp. continues to maintain its ratio of sales gains over last year's marks. Sales to consumers by dealers in July were 134,749 cars and trucks, an increase of 33 per cent as compared with July, 1926, when such sales were 101,576. In line with the seasonal trend, there was a drop of about 15 per cent from the June total of 159,701 units.

Shipments by manufacturing divisions to dealers in July were 136,909 vehicles against 87,643 in July last year, an increase of 56 per cent, with a drop of about 12 per cent from the June total of 155,525.

Sales to users for the first seven months of 1927 show a gain of over 35 per cent over the corresponding period a year ago, while sales to dealers registered a gain of about 41 per cent.

Comparisons follow:

Dealers' Sales to Users

	1927	1926
Jan.	81,010	53,698
Feb.	102,025	64,971
Mar.	146,275	106,051
Apr.	180,106	136,643
May	171,364	141,651
June	159,701	117,176
July	134,749	101,576
Totals.....	975,230	721,766

B. M. Parker Made District Manager for Kellogg Co.

ROCHESTER, N. Y., Aug. 24—B. M. Parker has been appointed district manager of the southwest territory, for the Kellogg Mfg. Co. He has already assumed his new duties.

Ready for New Ford

MINNEAPOLIS, Aug. 23—Assembly of the new Ford car is expected to begin early in September at the St. Paul plant of the Ford Motor Co., which has been retooled for the purpose while shut down, according to Manager S. A. Stellwagen, who states that the first unassembled cars will arrive from Detroit, in a few weeks the plant will be ready to operate.

Lovejoy Wisconsin Changes Name

MILWAUKEE, Aug. 25—The Lovejoy Wisconsin Co., for the past seven years distributor of Lovejoy hydraulic shock absorbers, has changed its name to Euechle Sales & Service Co. The concern will continue its former connection with the Lovejoy under the direction of United Motors Service, but is adding the Ajax metal spring cover line and later will still further enlarge its scope.

Gas, Oil and Hot Dogs—Drive In

HERBERT R. HYMAN leaves Homer McKee to become director of merchandising for Keystone Knitting Mills, Ltd., of London. Shall we say that Herbie has long been famous for his yarns, or that he is taking a long trip to tend to his knittin'?

Gasoline in Panama must be colored green, by order of the Canal Zone government. Three guesses as to the ancestry of the official who put that one over.

Master So-Lo Jack is the name of a new piece of equipment. Due to our failure to find it when we needed it, we long ago christened ours "So-Long, Jack."

"Klose Kut" Hack Saw is announced. Recommended to the cutters of kolledge-kut kampus klothes.

Kansas City branch of Diamond T Motor Car Co. is conducting a sales contest with a trip to the Dempsey-Tunney fight as first prize. That's what we would call an appropriate preliminary bout.

Warehouse of Kennedy-Shrader Motor Co., Louisville, Ky., was completely razed by fire destroying 150 used cars, says a news item. We're sorry for the Kennedy people, but they'll have no used car problem for a while.

Gun men in the automobile paint shops of Detroit receive an average of 80c an hour, says N.A.C.C. report. Gun men in Chicago do much better than that, but, of course, they have to do a lot of night work.

Ford plane to hold 100 passengers, says this week's issue of MOTOR AGE. It may hold that many but will there be that many to hold?

Air transport lines form association. Since we are full of slogans today, here's one for the association which, wethinks, is worth a reward, "Let us do your 'airands.'"

Standard oil gets German fuel patent, says dispatch from Frankfurt-on-Main. How suitable an item that is for this department we leave you to imagine.

The drive-yourself idea is making a big hit with Filipinos. They've been seeking to run themselves for a long, long time.

No, there is no truth in the rumor that the new Ford car is a cross between the Model T and a camel, and can go eight days without gasoline.

U. S. District Court rules storage batteries are not taxable. This will be a shock to the Department of Internal Revenue.

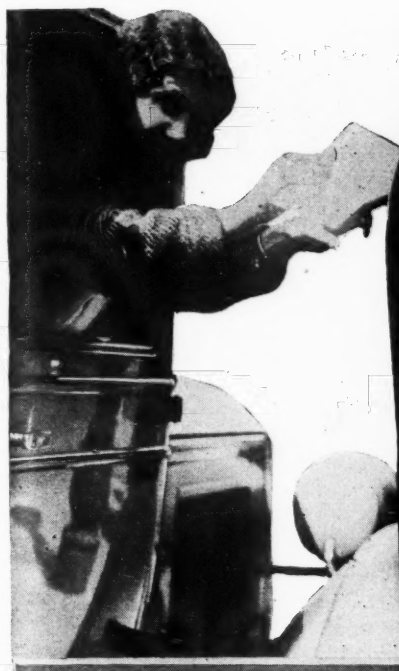
General Motors buys Blossom lock license. And with typical enterprise doubtless will proceed to make two locks grow where only one grew before.

A letter received by the technical editor is signed "T. B." Jones, Denver, Colo. Give this lad credit for a sense of humor.

Buy your replacement storage batteries by mail and save half, says an alluring ad. That's not so bad if the postmaster is ready to install it and supply you with free water.

John Cleary Says—

- ¶ *Some folks are courteous because they are built that way.*
- ¶ *Others are courteous because they figure it is good business.*
- ¶ *Whatever the motive, courtesy costs nothing—but it pays amazingly large dividends.*
- ¶ *Courtesy is an investment, not a speculation.*



**COURTESY
MAIL BOX**

**FOR AUTO PATRONS
LETTERS ONLY**

**15 DAILY
COLLECTIONS**

Another convenience for motorists. Congestion about the post office sections at Oakland, Calif., resulting from people parking their cars just to get out and mail a letter, has brought about the placing of a mail box at the curb, for the use of automobile patrons only. The box is within easy reach of the motorist

Including the Scandinavian



A prince earns his reward. Above is Prince Lennart with a Nash coupe that was given him by his father, Prince William of Sweden, for passing his college matriculation examination



Where is the hokey-pokey wagon now? Here is its modern successor—a specially-constructed body on a Chevrolet chassis containing a complete refrigerating unit capable of maintaining a temperature of 5 to 10 degrees above zero

There seems to be no limit to the utility of the automobile. Here is a store on wheels belonging to Alphonse Roy, of Kent, Maine, that travels 40 miles daily, furnishing rural free delivery of viands and other necessities of bucolic life



Two "Comps" From the

*The Stage Furnishes Salesmen a
of Concentration
Enthusiastic*

By John

WE have been trying for a long time to concentrate on some thoughts about concentration. But so many ideas and fancies have been crowding in on our mind that it resembles a three-ring circus or a continuous vaudeville show. There's a thought on concentration in that simile.

Some salesmen's minds are like a perpetual three-ring circus. They come down to the office in the morning with no plan for the day's work. It is hard for them to make a decision about any-



Theatre

*Pair of Ideas. They Are the Value
and the Reward of
Repetition*

Cleary

thing, because they can't give five minutes' consecutive thought to it. There are so many other things they have to think about at the same time.

When they ought to be giving their undivided attention to a new sales campaign, they are allowing their minds to become cluttered with pictures of Old Man Smith's peevishness over the delay in the delivery of his sedan; Mrs. Brown's ire over the mistake in the shade of her upholstery; the contrariness of some of the mechanics in the shop; that fizzle at the eighth hole yesterday afternoon; the progress of the current over-ocean fliers; the answer to Question 5 in the MOTOR AGE weekly quiz, and what not.

It's like trying to watch the trick elephants, the comical clowns, the performing geese, the strong man and the equestrian family in turquoise-blue tights, all

CONCENTRATION has been defined as the act of focusing attention upon one object or one group of objects. In business practice it means devoting all our attention to one problem, disposing of that, and then turning all our attention to the next.

Thus the prominent actors concentrate on each succeeding audience. They don't lose interest in their lines and grow stale in their business. Night after night they repeat the same speeches and fame is their reward.

What has this do with salesmanship? This article will answer that question to your satisfaction.

at one time. It can be done, but only in an indifferent manner, as everyone knows who has tried it.

Usually such men do not look back over the happenings of the day. If they do, they are likely to wonder why they did not get anywhere with their work.

A vaudeville show does not get anywhere. We don't look to the variety stage for an exemplification of the law of dramatic unities, the law requiring that in a dramatic performance there must be unity of time, unity of place and unity of action.

We expect a hodge-podge of trained dogs, loquacious prestidigitators, whirlwind dancers, sidewalk comedians, ventriloquists with dummies named "Johnny," female impersonators, bucolic sketches, press-agented stars from musical comedy, foreign acrobats and movies of the Ipswich Fair in the Pathe's Weekly.

The very reason that a vaudeville show does not amount to anything when it is all over is the same reason that some of our efforts go to waste. Plenty of scatteration, but no concentration.

Concentration has been defined as the act of focusing the attention upon one object or one group of objects. In business practice it means devoting all our attention to one problem, disposing of that and then turning all our attention to the next.

The salesman who gets the most out of life in both business and fun is the man who puts his whole mind to the work that is his during business hours and then plunges just as wholeheartedly into his play with mid-iron or racket or rod.

Concentration—that is one lesson we can learn from the stage. There is another lesson just as important.

The people across the street haven't had their Victrola long enough for the novelty to wear off. Every Saturday night the head of the house brings home some new records. On Sunday they play these tunes over and over again. The favorite record last Sunday and all this week was "The Rosary."

We all like to hear "The Rosary" when it is sung well, but even Galli-Curci could not save it from becoming stale and tiresome and hateful when served for breakfast, lunch and dinner and in the 'twentimes. And yet, when company comes to our house and they hear the piece for the first time, they go into raptures over it like we did when *paterfamilias* across the way played the thing for the first time after he brought it home. We have become sick and tired of it, but it appeals to these visitors like something entirely new.

The machine puts into its hundredth performance the same beauty of tone, the same faithful reproduction of

(Turn to page 30, please)





Women Do—

IF you paint them right, they soon take flight. In regard to merchandising used cars, this is the sincere belief of the Ostendorf Motor Car Corp., Franklin dealer of Buffalo, N. Y. The soundness of it is proved by results.

THE used car problem has been solved. The Ostendorf Motor Car Corporation has found the answer.

The answer is paint.

If you paint 'em right, they soon take flight, this Franklin dealer in Buffalo says.

Then straightaway this house proves it. Proves it with records, showing that this company has sold at least one used car every day since it adopted its present method of super-painting them. And that was a year ago. A used-car-a-day isn't so bad when one considers that most of the autos disposed of were Franklins or cars of its class.

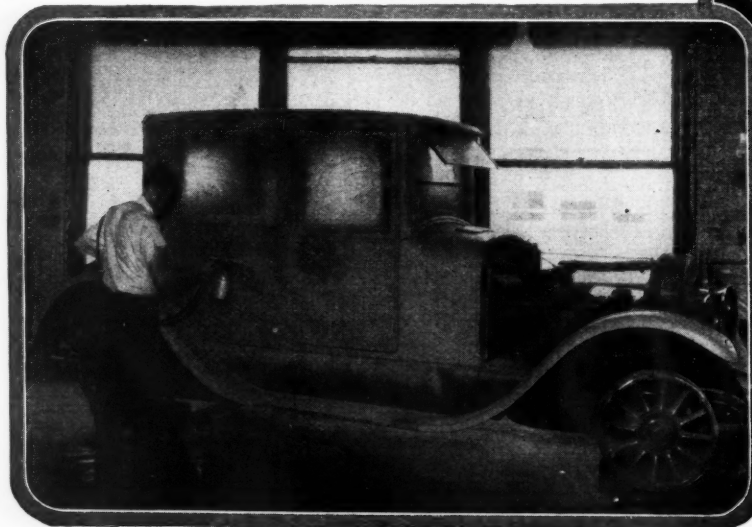
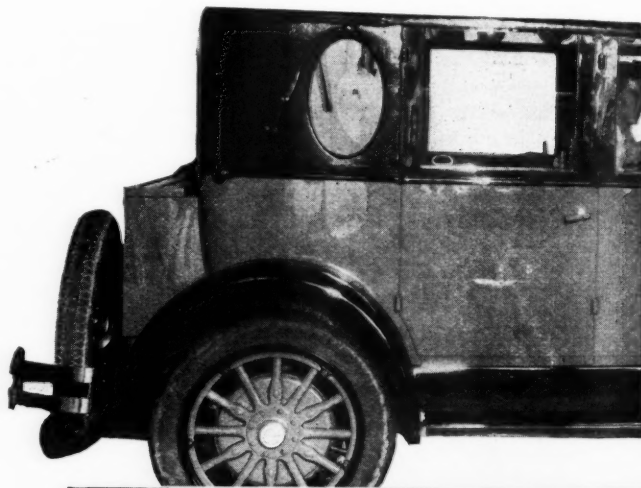
Time was when the Ostendorf company's used cars didn't move so rapidly. Like all other dealers, it was worried by the second-hand car bogie. It resorted in turn to all the time-honored expedients to move them, but with indifferent success. There must be some way to keep 'em going, it said to itself. Straightaway it set out to find it. As an experiment, the company resolved to see whether used cars would sell faster if properly painted. Properly painted—in its mind—didn't mean the kind of painting a car gets in the average shop. What the Ostendorf company had in the back of its head was a super-paint job—the very best that could be performed, best in materials, workmanship, color-harmony, and economy. The highest-class work at the lowest consistent price.

The first thing it did was to engage Harry L. Weston as foreman. He proved to be a real "find." He had, and has, good ideas as to how cars should be painted. He uses these ideas. The first thing he did was to set

*Paint Works Wonders to the Visage
and Endows Used Cars
and Makes*

By Edward

the company's paint shop in order and assemble a competent crew. Then he repainted all the used cars the Ostendorf company had on hand.
Presto!



The car has been stripped for paint shop action. Windows and windshields have been given a protective coating and varnish is being applied

All dents are taken out before the painting operation is commenced. Other preliminaries are disposed of and then the paint is sprayed on as illustrated at left

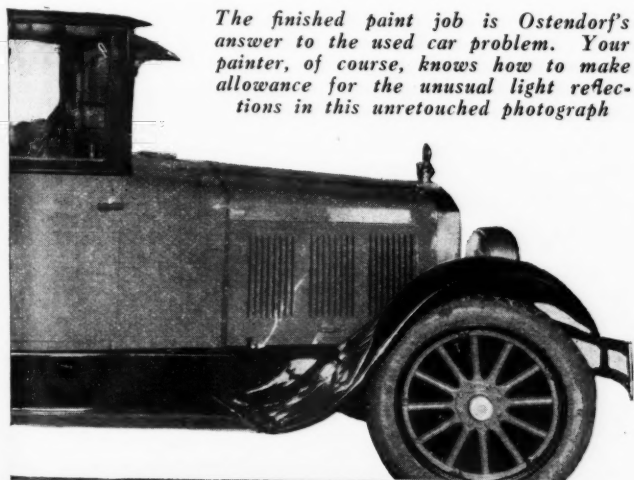
Why Not Dealers



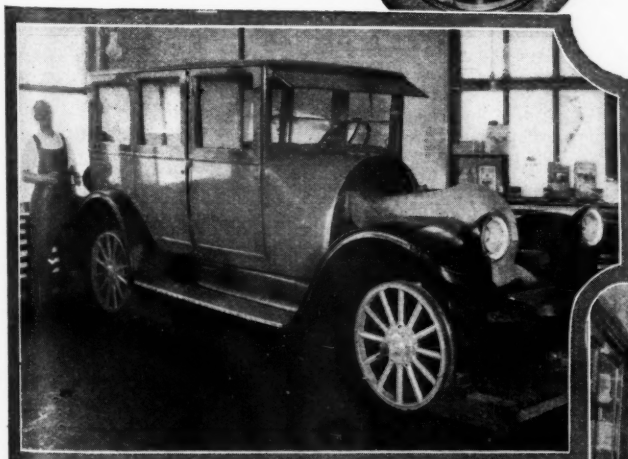
*of Many an Unprepossessing Female
With Similar Charm
Them Desirable*

Scanlan

As fast as they were painted they sold. When some proud buyer drove off with "Jonah" the Ostendorf company was amazed. "Jonah" had been hanging around until everyone in the establishment was tired of looking

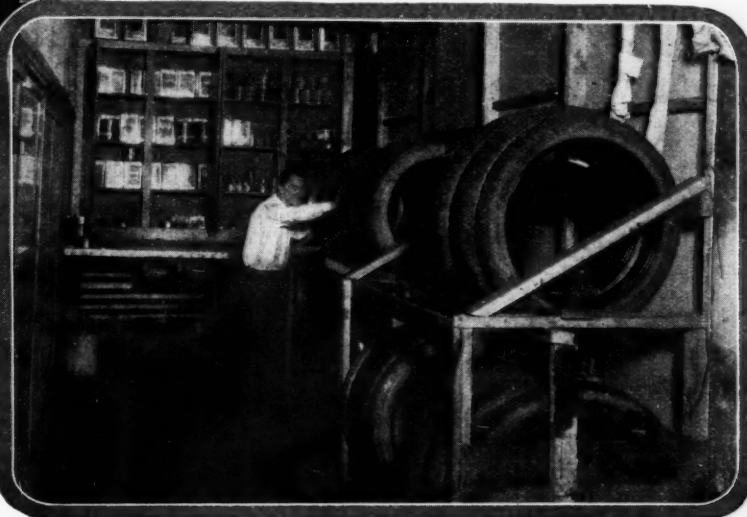


The finished paint job is Ostendorf's answer to the used car problem. Your painter, of course, knows how to make allowance for the unusual light reflections in this unretouched photograph



Finishing is an important task, one that may mar or make a paint job. Ostendorf insists that it be done right

The tire rack (right) is one time-saving feature of the Ostendorf system. Tires are removed when the job is received, labeled and placed in the rack where any worker can lay his hands on them at a moment's notice



OSTENDORF'S used car sales average is one-a-day, not so dusty when it is remembered that most of those sold are Franklins or cars of that class. Ostendorf does it with a super-painting job at small cost. For details read the story.

at it. It was a good car, but it just wouldn't sell. No prospect would give it even a second look. Mr. Weston transformed it with his art. It sold before it had been back "on the floor" an hour; in fact the first man to whom it was shown purchased it.

That sort of thing has continued. Trade-ins are accepted, turned over to Mr. Weston, painted, put back on the floor and sold. Some of them sell before the paint job is finished.

There is no magic, Mr. Weston says, in this car painting, that keep used autos on the move. Its just doing the thing right. The factors chiefly making for excellence of the paint work under his direction are: Order, cooperation, team-work, efficiency, and knowing what to use, and using it.

"In our shop there is a place for everything," said he, "and everything is always in its place. No time is wasted looking for this or that. The shop is scrupulously clean all the time. Our workers, seven in number, function almost flawlessly as individuals, and almost perfectly in team-work. They are equally paid. Each can do the work done by any other and do it equally well. They frequently shift from one job to another. Ours is a shop without a boss. I am just one of the gang."

Car painting under Mr. Weston's direction does not differ in theory from that done in other first-class shops. It is his system.

By preventing waste of time and by getting out of his men the best there is in them, through intelligent direction, considerate treatment, square dealing, inspiring example and good-fellowship, he has made it possible

W O M E N D O — W H Y N O T D E A L E R S ?

to paint used cars much better than they are commonly painted and at considerably less cost. Under his system the actual cost (labor and materials) for painting large cars is \$70 to \$100; small cars \$24 to \$50.

To illustrate: One time-saving feature of his system deals with tires. When a car is received in the shop the tires are removed, the rims primed and given a coat of black color varnish. Then the tires, labeled so that any worker in the place can lay his hand on them at a moment's notice, are racked. "In some paint shops," said Mr. Weston, "an hour is sometimes wasted looking for the tires when the time comes to put them back on."

It's the same with the nickel work. When the tires are taken off, the nickel work is removed, carefully numbered and sent out to be renickeled. It is invariably back before it is needed and is always placed where it can be instantly found when wanted.

Mr. Weston's story, as to how he paints cars, told in his own words, follows:

"When the car is placed in the removing room one of our men takes off the paint, cleans the chassis and primes the same. This takes 1 to 1½ days. Then the body is looked over for dents. Smashed fenders are drummed out and sanded down with No. 80 sandpaper and washed with thinner. The car is moved into the spray room, where it is sprayed with a coat of primer, which sets for two hours. Next it gets filler coats, oil fillers, requiring four to five coats, put on with a camel hair brush to eliminate brush marks. It gets two coats in one day.

"The car is then set aside to dry until next morning, when two men are put at rubbing the filler, this operation varying according to the size of the car.

"The average rubbing requires from 10 to 15 hours. The car is then put in the spray room, where the spray man masks in the windows with a mixture of window cleaning powder and motor oil. He then sprays the job, first coating the fenders with two coats of black lacquer. Then it is masked and then he shoots the body color. The job is masked again; then the upper structure is sprayed. This operation requires three to five hours. The car is then put on the side for five to six hours and then given a light 320 rub. This takes three to five hours. It is then moved back to the spray room and receives a finish coat on the body, also a light coat on the wheels. This is let dry for three to five hours, then the windows are cleaned with a safety razor blade and washed with alcohol. The car is polished. We then cut in the door jambs and dress the top. The chassis is painted with a good black color varnish. This operation runs from four to six hours. The car is then taken over by the finisher and rubbed down on the fenders with a 320 paper and then shellacked. We touch up any spots which may show primer through and then finish with black color varnish, which leaves a very high finish when put over the lacquer under-coat and holds its lustre for some time to come.

"The wheels are included in this operation, which requires 9 hours. The car is then moved out of the finishing room and assembled."

Two "Comps" From the Theatre

(Continued from page 27)

the songster's voice, that marked its first performance. It sells itself to each new auditor.

Have you ever attended the opening night of a new play starring a prominent actor? Have you noticed how carefully and how painstakingly he works to make the play successful by selling it to his first-night audience? If he is a real actor, honest with his public and true to his calling, you can make a return visit to the hundredth performance of this same play and find him putting all his heart and all his skill into his part, like he did on the opening night. He does not allow himself to go stale, to lose interest in his lines or to become careless with his business, even though he has to speak the same words and make the same gestures at six night performances and two matinees every week for a year or more. It is an old story to him, but he realizes that most of the people out front are hearing those words and seeing those gestures for the first time. It is new to them, so the good actor regards every night as opening night. As far as his audiences are concerned, it is.

Some of us have been telling our sales story so long that there is danger every once in awhile of going stale. We have heard so much and talked so much about the merits of the products we are selling—we have lived so long in the atmosphere of our own proposition—that we unconsciously act as if we imagine that everybody else knows these things as well as we do. We take it for granted that everybody knows our lines.

Try this on the next prospect you talk to. Tell him some of the things about your product that you imagine the whole world knows. After you have done this to a

number of prospects you will be no more surprised at the average man's ignorance of facts that you thought were universally known than is the comedian at the way people continue to laugh at the joke he has been telling for years. The comedian expects those laughs, just as you should expect to astonish prospects when you tell some of the astonishing things about the manufacture or performance or service of your product.

Automotive sales will always be helped by salesmen telling the truth about their products in an enthusiastic way.

12 Out of 1000 Get Stuck

HOW often does a motorist run out of gasoline and what are the principal reasons?

The answer to the first is that 12 out of every 1000 get stuck at least once a month on account of no gas, the American Automobile Association finds on a recent analysis of 500,000 calls for free emergency aid made by its membership.

A high percentage of these "out of gas" complaints occur in the rush hour of the morning, the majority being business men enroute to work.

The reasons assigned are as varied as human nature, but in the main it is due to carelessness, while not infrequently hubby finds himself gasless as the result of the wife's, daughter's or son's use of the car.

The Association recommends that all manufacturers include dash gas gages in all models as the best solution to the problem.



This new home of the Paige Co., of New England, is the culmination of 17 years of progress

Another Page

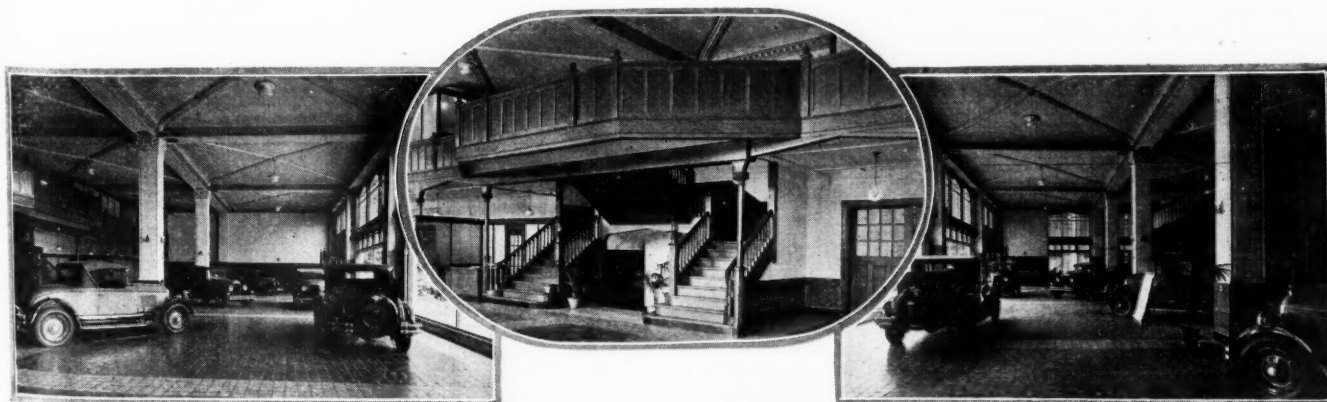
*Is Turned in the History of the Paige Co. of New England With
Dedication of Its New \$500,000 Quarters*

ONE of the finest motor structures ever built. This expression was sentenced to hard labor many years ago, and although it occupies a prominent position on the shelf of bromides, there are occasions when it merits being taken down and given an honest airing. Such is the present instance, for the indefinite description is applied to the newly opened home in Boston of the Paige Co. of New England. It

was erected at a cost approximating half a million dollars.

This new building, located at 1075 Commonwealth Ave., is the culmination of Paige progress in the Hub City dating back to 1910. Every few years the company has had to expand. Starting in the Park Square section it moved to Boylston, then Newbury St., next to Com-

(Turn to page 40, please)



Interior views of the recently occupied Paige Co., of New England, quarters

dition

By
Lloyd S. Graham

S. A. STEPHENS, president of S. A. Stephens, Inc., Dodge dealer of Buffalo, N. Y., does not like to mess around with figures any more than a lot of other business men, but he recognizes the necessity of knowing exactly, from day to day and week to week, the condition of his business. To that end Mr. Stephens personally devised a report system of personal information on his business. This system (not to be confused with an accounting system) is so simple that twenty-five minutes a day is sufficient time for his stenographer to make up the reports and three hours once a week suffices for the weekly features. All the forms are illustrated and explained.

ing the number of Dodge cars, Graham Brothers' trucks and others sold under columns marked today, this week, this month and year to date. In the upper left corner there is also a summary with similar column markings showing sales by the three points of retail and also the wholesale.

The "Used Car Daily Delivery Report" is similar to the one just described except that there are some important differences in the column markings. Reading from left to right they are: Customer's name, address, make of car purchased, type and year, purchase price, date purchased, carrying charge, reconditioning charge (marked

The illustration shows a hand holding a pen, pointing to the 'SALES DEPARTMENT WEEKLY REPORT' form. The form is a large grid with columns for 'SALES', 'DELIVERIES', 'CANCELLATIONS', and 'DATE'. It includes a section for 'NEW AND USED CAR REPORT (ON HAND)' with columns for 'SALES BY' and 'USED CARS'. The form is titled 'SALES DEPARTMENT WEEKLY REPORT' and 'COPY NO. 1'.

A perusal of the forms above is convincing evidence of the comprehensiveness of the reports demanded by S. A. Stephens, Inc.

with a "P" if painted), total cost, general and selling expense, selling price, loss or gross profit, salesman.

Another valuable report form is the "Sales Department, Daily Report." In the large left-hand column there are listed the names of all salesmen, classified as to whether they are passenger, truck, or used car salesmen.

The columnar divisions are

The illustration shows two forms. The top form is the 'USED CAR DAILY DELIVERY REPORT' with columns for 'CUSTOMER'S NAME', 'ADDRESS', 'MAKE', 'TYPE AND YEAR', 'PURCHASE PRICE', 'DATE PURCHASED', 'CARRYING CHARGE', 'RECONDITIONING CHARGE', 'TOTAL COST', 'GENERAL AND SELLING EXPENSE', 'LOSS OR GROSS PROFIT', and 'SALESMAN'. The bottom form is the 'SALES ANALYSIS' form with columns for 'MONTH', 'SALES', 'DELIVERIES', 'CANCELLATIONS', 'DATE', and 'PER CENT'. It includes a section for 'SALES ANALYSIS' with columns for 'TOTAL', 'PER CENT', and 'DATE'.

At left is the form on which new car deliveries are reported each day

Above are the daily used car delivery and monthly sales analysis report forms

ARE YOU HELP TO CONDITIONS?

separated into three general classifications, with a column at the extreme right for "Orders on Hand."

Naturally the first general division is headed "Sales" and in this division are four columns headed: "Today, This Week, This Month, and Year to Date."

The second general division is headed, "Deliveries," and is divided into three parts which are: "This Week," "This Month," and "Year to Date."

The third general division is headed, "Cancellations," and has the same three columns which are included in the second general division.

There are spaces for the totals in each of the classifications of salesmen: passenger car, trucks, and used car, with a space for the grand total at the bottom of the page.

At the end of the week these daily reports are consolidated into a weekly report, but in this case the classification is by types of cars. This report covers new cars and each sheet is a report on one salesman whose name appears on the upper left hand corner. There are three general classifications of cars. They are four-cylinder passenger cars, six-cylinder passenger cars, and trucks and commercial vehicles. The latter classification includes the listing of taxicabs, convertible roadsters and all-purpose sedans.

Like the sales department daily report at the top of the ruled spaces there are three general classifications covering "Sales," "Deliveries," and "Cancellations." Each of these are divided into three columns under the headings, "This Week," "This Month," and "Year to Date." A summary of this weekly report by salesmen gives an accurate picture of the condition of sales. As time goes on and comparisons can be made of the figures of various years, these reports become constantly more valuable.

In connection with this weekly picture of the condition of business from the standpoint of sales of new and used cars there is another report which is called, "New and Used Car Report—(on Hand)." This is really a car inventory which must be made up without resorting to office records. In other words, this forces the person who makes the count to actually account for every car in the main headquarters, in the branches or in storage.

This report also is subdivided according to four-cylinder models, six-cylinder models and trucks and commercial cars. At the head of the columns there are spaces to show the number of cars at the Main Street headquarters, either assigned or unassigned, at the Hertel Avenue branch, at the Seneca Street branch, outside or in the paint shop, in the warehouse, the total, and those in transit. The used car portion of the report merely shows a summary divided under the heads: Dodge Brothers," "Other Makes," "Trucks," "Total on Hand."

Below the used car summary there is a space headed "Remarks," which is used for listing cars in the hands of demonstrators at the time the inventory is made.

Another valuable form which aids in giving a true picture of business conditions as applied to the industry in general and S. A. Stephens, Inc., in particular, is a sales analysis sheet. This is based on car registrations and each make of car is listed separately in detail by months, it being possible to list two cars on each page.

Under sub-divisions covering Buffalo city, the balance of Erie county in which Buffalo is located, the two adjoining counties of Cattaraugus and Niagara, total registration, and Dodge Brothers percentage, comparative figures are given for the current year as they are made available and the previous year in the same months. In each geographical case there is also space for the percentage of increase and the position of each car in the field from month to month.

One of the fine things about the forms which Mr. Stephens has developed is their simplicity. By using them he gets away from a great mass of detailed figures and at the same time has his fingers constantly on the pulse of his business. It is easy to detect quickly and accurately the slightest factor which is out of balance, the salesman who is not producing, the salesman who has too many cancellations, the ratio of used cars purchased to new car sales, comparisons of the current year period with that of previous years, and scores of other factors necessary to keep a business on an even keel.

Magnetic "Nail Picker" Manicures Highways

A MAGNETIC nail picker for highways has been built at the State College of Washington and is described in Engineering Bulletin No. 21 of the Engineering Experiment Station of the College by H. J. Dana. Two or three electro magnets, comprising a core made of a length of 12-in. I-beam and wound with magnet wire, are suspended from a steel cross beam at the rear of a motor truck and are supplied with current from a direct current generator driven by a Ford engine, the whole powerplant being mounted on skids and carried on the truck. Each magnet draws about 30 amperes, and if a number of magnets are used they are connected in series and the throttle of the engine is adjusted to cause the engine to run at higher speed and give the increased voltage required. In use, the magnets are suspended with the front edge about 2 in. above the road

surface and the rear considerably higher, this design having been found to give best results.

The coil of magnet wire is thoroughly insulated and protected with a heavy brass plate. This plate, extending over the entire surface of the magnet, not only holds the coil in place but facilitates the removal of the collected iron when the current through the magnet is turned off. Owing to the fact that the leading edge of the magnet frequently comes in contact with rocks or with the surface of the road itself, a steel reinforcing strip is bolted to this edge. A like strip on the rear edge makes it possible to turn the magnet around and operate it in the other direction.

In the operation of the nail picker over the highways it was discovered that the amount of iron collected per mile is nearly uniform.

He Hears With His Fingers

*Texas Mechanic is
Stone-Deaf But
He's an Expert
in Noises*

DID you ever hear of a stone-deaf musician? Probably not. But, down in Austin, Texas, in the employ of the service department of the Benson Motor Co., Studebaker distributor, is probably the nearest approach to this phenomenon—a totally deaf expert in horn adjustments and squeak and rattle eradication.

Perhaps it is not strictly accurate to speak of Eugene F. Clarke, mechanic extraordinary, as totally deaf. For, only his ears do not function in the conventional capacity; he can hear—with his fingers—better than most people.

The story of Clarke's struggle to overcome the affliction which has been his since birth reads like a chapter from one of Horatio Alger's masterpieces. In his youth he developed an enthusiasm for mechanical problems, which, in his isolation, amounted practically to an obsession. Denied many of the pleasures which normal youngsters enjoy, he devoted himself to study and experiment.

With the advent of the automobile, Clarke recognized his mechanical "bent." For 17 years he has been employed, with the exception of a short period, by the Benson Motor Co. And, curiously enough, he has become a specialist in the one department which would seem impossible for him to conquer—the field of sound. From all over the territory adjacent to Austin, motorists bring their cars to this stone-deaf mechanic to have the squeaks, rattles and horn troubles cured.

Where another mechanic might hear the trouble and yet be unable to locate its seat without long and diligent search, Clarke's fingers—the fingers which serve him as ears—can find the difficulty almost instantly. To him, sound is vibration, and vibration cannot escape

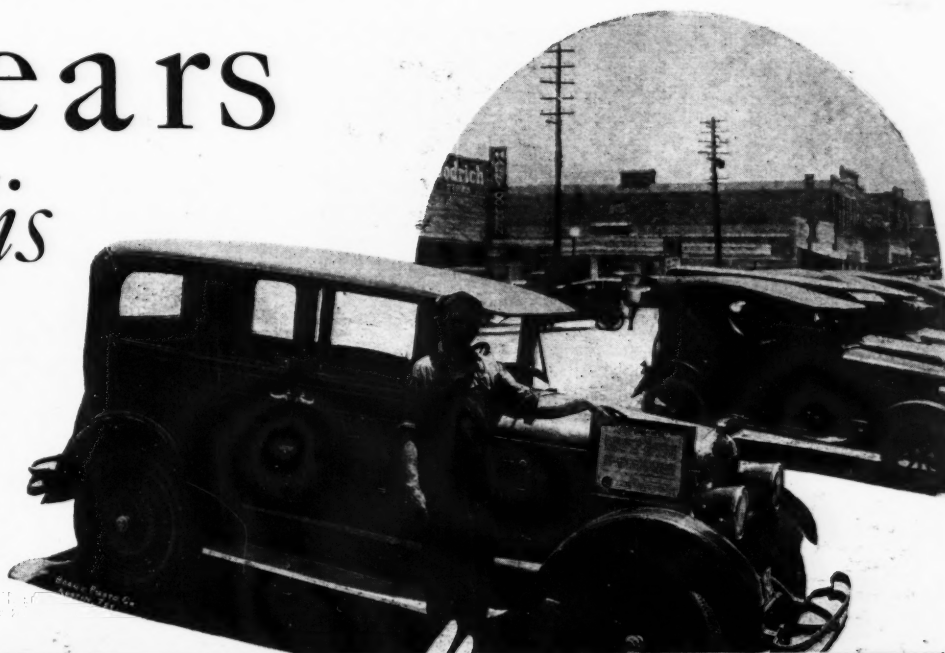
his hyper-sensitive digits.

In motor-tuning, as well, these highly-trained fingers are invaluable. The slightest grind of worn gears or the vibration of worn bearings so minute as to escape entirely the faculties of the average person are obvious to him. On the job he actually "hears" mechanical things better than the normal person.

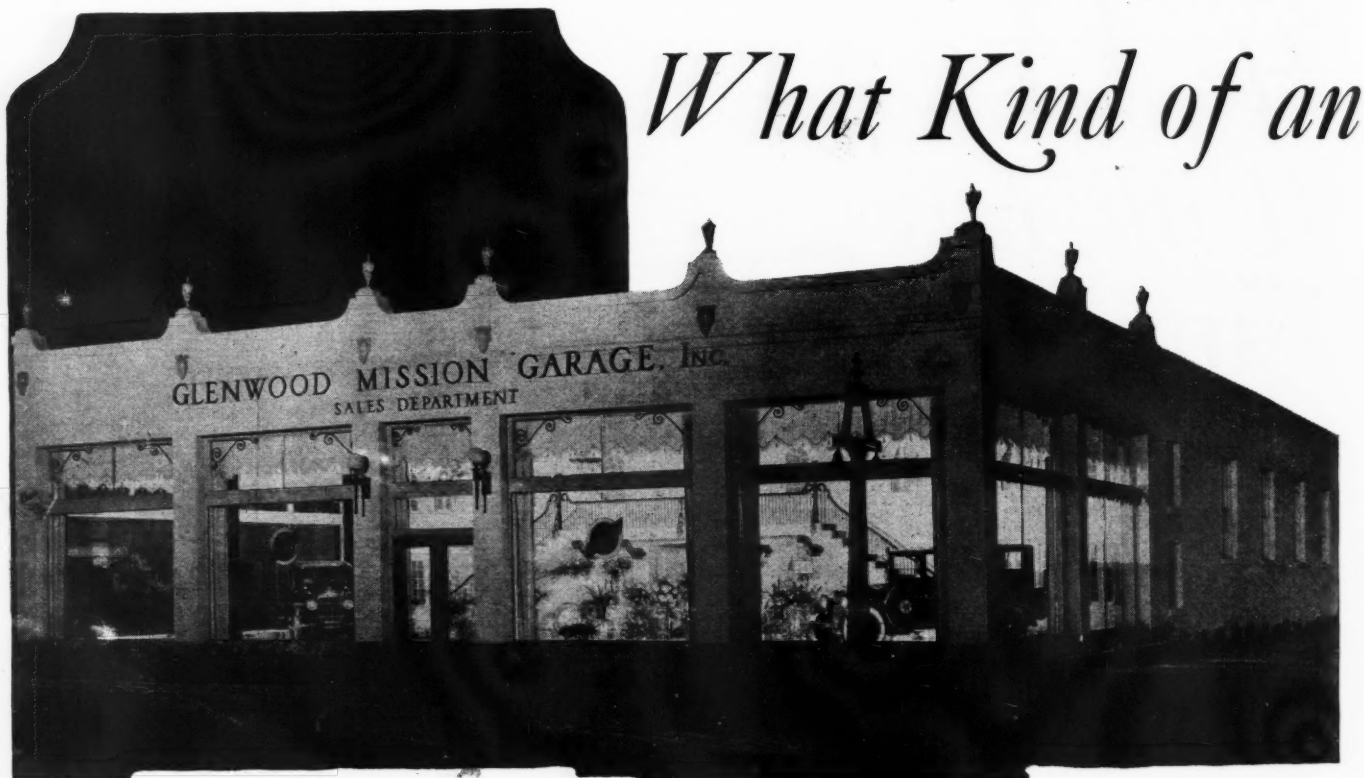
Studebaker prides itself on the service of its dealers and spares no effort to make certain that the favorable reputation it enjoys is not injured. The highest merit which Studebaker bestows is the Studebaker Certificate of Merit. To win this coveted certificate a dealer must keep his service station in top form at all times. The moment his service standard drops the Certificate of Merit is taken from him.

The Benson Motor Co. has one of these certificates in its possession at the present time and the officials of this concern believe that Clarke has played a large part in its winning—and holding.

In the words of his employers and their patrons "Clarke may be deaf—but he's a long way from dumb."



Eugene F. Clarke, stone-deaf, on the job as noise expert



What Kind of an

This beautifully designed structure is a good example of the modern type of garage that is rapidly replacing the cheaply built wooden buildings in the larger cities

AS long as public garages are built in old business sections of a city, no difficulty may arise affecting their legality and the right of operation, but where one seeks a location for a garage outside the beaten path there are many things to consider in the matter of legal obstacles. Often old established garages have been attacked in courts by citizens of the neighborhood on the grounds of operating as a public nuisance, and injunctions have been sought against others as being a nuisance.

Many have been the men who have lost fortunes by not knowing how to write their contracts, or have lost their businesses in the same respect. More are there who have neglected overhauling their bodies as they do their worn-out machines until all their financial gain could not buy back their health. Now this is not intended as a sermon, but to bring home the fact of the little lesson in the "ounce of prevention" wisdom as applied to the automotive industry. And, specifically, taking up in this article the question of determining where to build a garage, perhaps more specific, in pointing out where *not* to build a garage.

Legally speaking, what kind of an animal is this garage—is it of the prohibitive varmint class? Well, it is a sort of hybrid; sometimes it is, and oftener it isn't. The courts have held in authoritative decisions that a garage is not a nuisance *per se*; that is, the hybrid itself is not a nuisance. But courts all over the land have held in innumerable instances that the particular garage involved in the case was a nuisance. For instance,

a garage obnoxiously operated situated in a lonely desert with no surrounding human being as inhabitants, could not conceivably be held to be a nuisance. If so, then a garage would be a nuisance *per se*, and would be a prohibited animal any place. But the same obnoxiously operated garage would be a nuisance, and as such would be prohibited by law on proper presentation of complaint against it to the proper court of jurisdiction, in any civilized community in America—its being placed in an old established business section would not save it.

This means that a garage must be properly operated lest it become a nuisance any place. Fortunately American garage owners operate with such a high degree of efficiency that few fall into such looseness that would

bring them into court for keeping a nuisance. Either their high efficiency saves them or the broad and genial tolerance of the good-natured community saves their bad business methods or general laziness. Permitting rubbish and highly inflammable material to accumulate about a garage where oil and gas may render the risks of fire and explosion extremely hazardous would be a nuisance any place, and the running of engines with loud and unusual noises, coupled with the giving off of foul and obnoxious odors, if not the deadly poisonous monoxides, would render a garage a nuisance in most any location. Again, what would be an

An Ounce of Prevention is Worth a Wad of Jack

WHETHER in an individual instance a citizen is successful or not, the costs of defending one's business may become a considerable item of cost, besides the time and worry ensuing. So, to proceed to build a garage without looking into the legal aspects of the case is a serious error that may prove a costly one. This article, then, is intended to supply an ounce of prevention that is worth money. It takes up the question of determining where to build and where not to build a garage.

Animal is The Public Garage

Legally Speaking, It is a Sort of Hybrid—Sometimes It is of the Prohibitive Varmint Class and Oftener It Isn't. In Building a Garage What Are the Legal Obstacles Likely to be Met? Here They Are Discussed

By Wellington Gustin

(Motor Age Legal Editor)



Two other good examples of well constructed modern garages that are deservedly popular

obnoxious operation resulting in nuisance would vary according to location; what might be permitted in one business location would be objected to in another. This is in keeping with the reasonable demands of the inhabitants, and, at that, the rule should have the tendency to keep the garage owner on the alert and at least up to the standard of other business men in the neighborhood, though a mighty low standard indeed at that.

Now take the aforementioned garage first located in the desert, place a good manager in charge and place it in the established business section in a city, and the garage business cannot be legally questioned. But though not a nuisance as placed here it would become a nuisance if placed in a strict residential section of the town. So a public garage may be a nuisance from the manner of its operation, or from its improper location in a section of city devoted to raising a patriotic citizenry.

In a Pennsylvania case, *Prendergast versus Walls*, 101 Atlantic Rep. 826, the court said a public garage has been determined to be a nuisance in a residential

district, and this would be the case whether it was the violation of a building restriction of an annoyance to the general community.

In another Pennsylvania case, 112 Atlantic Reporter, 236, the court held that such a garage would not be a nuisance in a section devoted to business purposes. Between these two zones there may be some uncertainty.

In holding that a public garage in a residential section is a nuisance, the court said it was so regardless of the



violation of a restriction in the deed forbidding the use of the premises for offensive purposes or occupation.

The garage business is a necessary business, and the evils arising from odors of smoke and gasoline, and the noise in running of engines may be reduced to a minimum. Therefore in locations where the public are not affected in their comforts of daily living and general health there can be no nuisance.

In a well-reasoned and leading case from New York State, *Heeg versus Licht*; reported in 36 American State Reports 654, the Court took cognizance of the fact that garages are usually located in the thickly populated portions of a city, and often placed adjacent to dwelling houses. Especially applicable in cases where

(Turn to page 42, please)

Shocking!!

Such Were the Evils Revealed by Thorough Experiments With the Wiring of These Cars

REPLACING the high tension wiring of a car," says H. M. Jacklin, assistant professor of Automotive Engineering, of Ohio State University, "will result in an increase in power of 1 to 60 per cent and an increased gasoline mileage of 3 to 50 per cent. These figures will vary, of course, with the condition of the wiring that is to be replaced, but on the average it is worth while to replace wiring that is two or three seasons old or that has seen 25,000 or 30,000 miles of service.

"On the average car that has seen the service just mentioned the installation of new cable would be paid for by the saving in gasoline alone within 2000 miles. The comfort of smoother operation and the reduced strain on the car because of the more uniform running of the engine would be had without cost."

Surely something to talk about when selling this work to your service customers. Selling wire replacements is not only profitable to the shop but an actual saving to the customer. This was proved in the following tests conducted in the automotive laboratory of the Ohio State University for the Packard Electric Co.

The cars used were just average jobs—such as drive in and out of service stations every day. The only thing done to them before the test was to see that the spark plugs were clean and properly adjusted. Other adjustments and the old cables remained untouched.

There were three cars used. These included a 1921 Reo touring car that had run 27,400 miles, a 1924 Oldsmobile coupe that had gone 18,500 miles and a 1924 Buick sedan that had covered 23,110 miles.

The cars were tested on the chassis dynamometer as seen in the illustration. It will be noted that the rear wheels were mounted on drums in a pit. These drums were arranged to drive a Sprague block test dynamometer so that suitable loads could be applied. An auxiliary blower was mounted in front of the car to provide suitable draft while a traction scale was arranged to measure the traction of each car. This device consists of a bell-crank suitably mounted in a stand, one arm of the bell-crank being acted upon by the car through the bar shown connected to the front axle. The other arm of the bell-crank acted upon the heavy weights shown on the scales through the springs. The hand wheels were provided to enable adjustment of the bell-crank to the same position for all readings, thus always leaving the rear wheels in

position on the exactly the same drums for all runs, unless the bell-crank support should be shifted in the course of tests.

The right rear hub cap was removed so that a revolution counter might be used. The revolutions of the wheel and its mean radius were then used in checking the exact speed of the vehicle. An indicating electric tachometer was used when adjusting loads and speeds of the car.

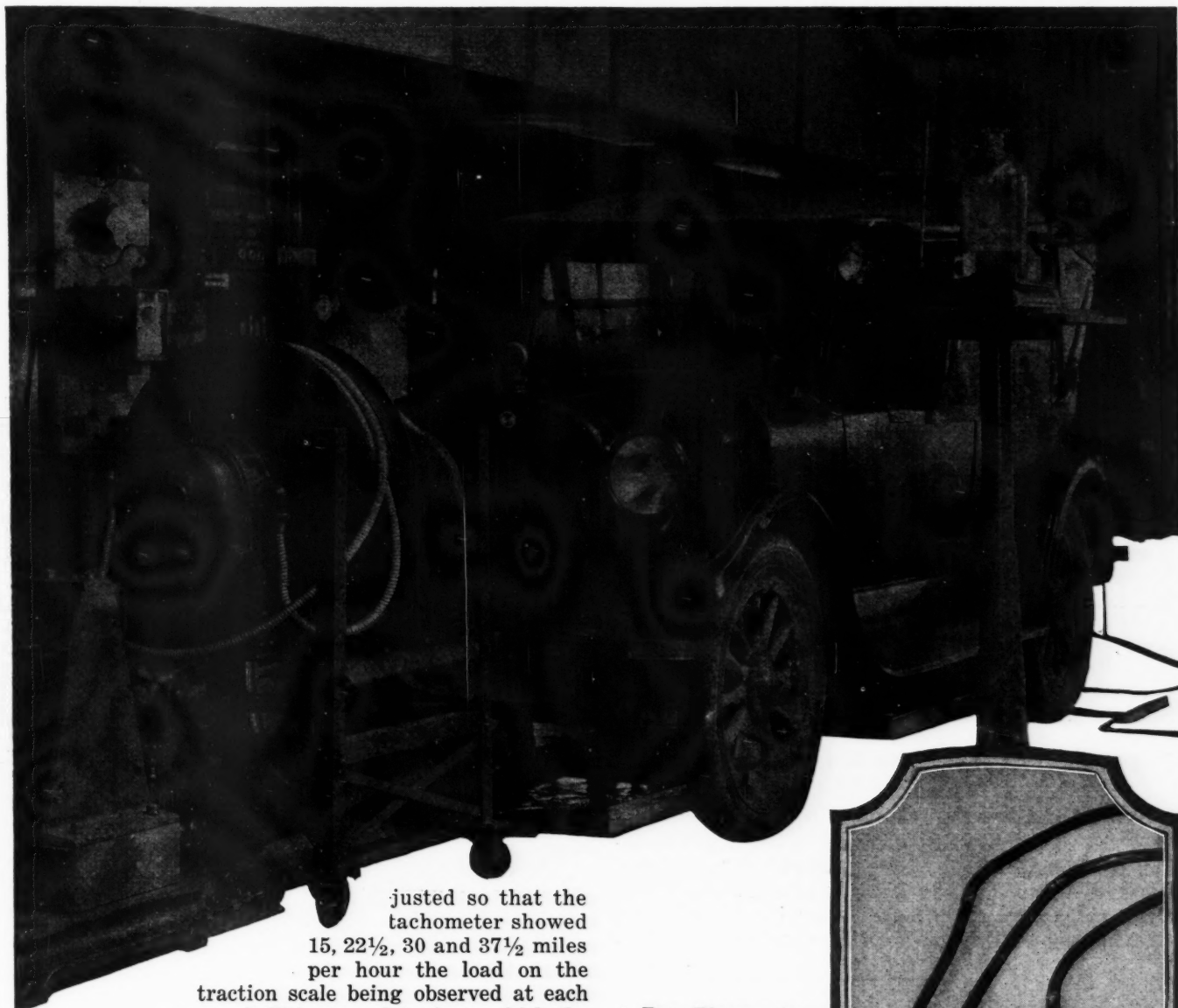
Knowing the weight of each vehicle and allowing for a passenger load, it was possible to calculate the tractive force needed at the wheels to approximate that necessary under average driving conditions at speeds of 15, 22½, 30 and 37½ miles per hour. With the engine thoroughly warmed, with the spark plugs cleaned and adjusted, and with the old cables exactly as they had been on the engine, the throttle on the carburetor and the load on the dynamometer were adjusted until the load was balanced and the proper speed was indicated by the tachometer.

Since the regular fuel system was disconnected and the fuel supplied from the bottle shown on the pedestal and the scales along side of the car—it was possible to make runs to determine the fuel consumption at the road loads. These fuel consumption runs were made at these calculated loads and at constant speed, so that they will, of course, show up better than can be realized in ordinary operation.

Great care was taken to have all desired conditions constant before starting any runs so that while the runs themselves were comparatively short, they are reasonably accurate and consistent. The charts shown cover only a portion of the data obtained during this test. From these figures it is possible to construct curves or graphs which show performance for any speed within the range of each particular car.

After making these tests at road loads, the throttle of the carburetor was opened wide and the load ad-





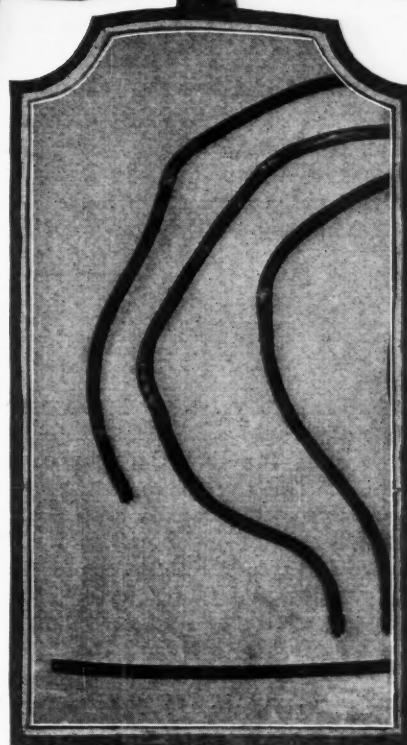
justed so that the tachometer showed 15, $22\frac{1}{2}$, 30 and $37\frac{1}{2}$ miles per hour the load on the traction scale being observed at each speed. This gave data from which the maximum power of the car was calculated. New cables were then installed and the tests repeated in the same sequence, the results being shown in the three tables which are a part of this story. No fuel consumption runs were made at maximum powers as it was impossible to prevent over-heating even with the auxiliary blower in use.

The Oldsmobile was the first car to be tested, and the results obtained showed that changing to new cables improved the gasoline mileage by 14 per cent at 18 miles an hour and 7 per cent at 30 miles an hour. While the gain in maximum power is not great within the limits of speed for these tests, the owner of this car, Professor Jacklin, states that the car will now travel 3 miles per hour faster than before and also that it is running more smoothly.

The Reo showed a gain in gasoline mileage of 7.32 per cent at 18 miles per hour and 3.3 per cent at 38 miles per hour. An increase in maximum power from 1.4 per cent to 3.3 per cent was first obtained. However, due to the heavy carbon deposits it was necessary to burn out the carbon after which the increase in power jumped to 13.2 per cent. It was concluded from the run on these two cars that new cable made an average gain of about 5 per cent in gasoline mileage, and an average gain of about 2 per cent in maximum power—which, of

Top: The complete laboratory equipment used for the ignition wire tests

Right: Some of the bad wiring removed from the Buick



course, resulted in increased accelerative ability and an increase in the top speed of these cars. Performance was better in every way.

The Buick sedan showed a remarkable improvement with new cables. This was due, no doubt, to the very bad condition of the old cables which are shown in the accompanying illustration. It will be seen that the cables were chafed through and pinched badly in places which accounts for the fact that their replacement caused a gain of from 30 to 50 per cent in gasoline mileage, and a power increase of 50 to

"SHOCKING" WAS THE VERDICT

60 per cent. Performance, in every way, was better.

It was to be expected that with the old wiring this Buick would run in a rather erratic manner, but there is no doubt that cars on the road today are in as bad condition and would be vastly improved by changing the high tension wiring.

Rubber has many enemies. One has but to look at his tires to see how the weather dries out and cracks rubber. Conditions under the hood are even worse than on the road, for here there is heat, oil vapor, and vibration. In addition, there is chafing in places and in other places there is high compression of the insulation where clamps are used to hold the wires in place. All of these things work together to break down or weaken the insulation. As the high tension wires of an automobile carry in the neighborhood of 10,000 volts, it is little wonder that these wires need replacing when the insulation gets in bad shape. Failure to replace them frequently leads to uneven engine action, for which the other parts of the ignition system, the carburetor, and the valves are frequently and unjustly blamed.

The reputation of many service stations hangs by a thread of wire and replacing this wire at intervals is not only profitable to the service department, but a decided advantage to the car owner as it improves performance and reduces operating expense.

Test of 1921 Reo Touring Car

Engine No. 16,471

Speedometer reading 27,400 miles

OLD CABLE

Car speed in M.P.H.	16	23.65	31.8	39.0
Hp. at rear wheels	3.43	6.26	11.33	19.3
Miles per gallon	17.9	19.05	16.18	12.03
(Maximum power developed at rear wheels, 28.8 hp.)				

NEW CABLE

Car speed in M.P.H.	15.65	23.25	31.86	39.42
Hp. at rear wheels	3.24	6.33	11.41	19.64
Miles per gallon	19.46	19.82	16.62	12.02
(Maximum power developed at rear wheels, 32.4 hp.)				

Test of 1924 Oldsmobile Coupe

Engine No. B11,449

Speedometer reading 18,500 miles

OLD CABLE

Car speed in M.P.H.	15.76	23.33	31.25	40.10
Hp. at rear wheels	2.45	5.24	9.12	15.98
Miles per gallon	17.35	17.78	17.20	14.40
(Maximum power produced at rear wheels, 19.44 hp.)				

NEW CABLE

Car speed in M.P.H.	15.50	22.95	31.42	40.00
Hp. at rear wheels	2.37	5.20	9.18	16.00
Miles per gallon	20.40	19.82	17.85	15.21
(Maximum power produced at rear wheels, 19.94 hp.)				

Test of 1924 Buick Sedan

Engine No. 1,260,603

Speedometer reading 23,110 miles

OLD CABLE

Car speed in M.P.H.	15.79	23.53	31.60	38.40
Hp. at rear wheels	3.32	6.43	11.42	18.32
Miles per gallon	9.10	10.10	9.48	7.75
(Maximum power developed at rear wheels, 22.1 hp.)				

NEW CABLE

Car speed in M.P.H.	15.80	23.65	31.25	38.70
Hp. at rear wheels	3.37	6.62	11.40	18.35
Miles per gallon	13.58	12.63	12.70	11.80
(Maximum power developed at rear wheels, 34.95 hp.)				

Another Page Is Turned

(Continued from page 31)

monwealth Ave., and finally into its present home a few days ago.

Despite the fact that the concern now has 140,000 sq. ft., the overhead cost of operation will be less than formerly when it had 80,000 sq. ft. Now all departments are under one roof. Before they were scattered in three buildings. And it took time and expense to get things done properly. Manager Rollan A. Green says everything is going to go like clockwork with no waste effort in the future.

The new building, steel and concrete, has 120-ft. frontage and 300-ft. depth. There are three stories on Commonwealth Ave. and four on Gardner St. The salesroom covers the entire front and is 50 ft. deep. Being two stories high it allows the mezzanine floor to house the executive offices, with customers' rooms underneath.

It is possible in the salesroom to display 12 cars without crowding and 16 if necessary. The used car department is directly back of the salesrooms. It takes up 6410 sq. ft. There is room for 35 cars. Further along on this lower floor is the service sales department, with a waiting room for owners, and space for many cars.

On the third floor, containing 32,000 sq. ft., the me-

chanical work is done. Every modern facility in equipment for servicing cars is there. The section given over to the new cars being prepared for delivery occupies 20,546 sq. ft. on the second floor. The parts department is also on this floor, having 4628 sq. ft.

At the Gardner St. end the depth of the land allows for four stories. So the lower section or basement contains the heating equipment.

Simplicity marks the interior of the salesroom. The walls are finished in a delicate tint of tan, and the ceilings have an ethereal blue tone that harmonizes perfectly with surroundings.

Mr. Green has been with the company many years. He has been the active head of the organization, which now comprises 130 people in the Boston branch.

A three-day celebration marked the opening of the quarters. The first day was given over to the welcoming of Paige owners. The second was dealers' day, and the third was "Junior Paige Owners' Day," when the children of Paige car owners were entertained.

Factory officials present at the dedication were Joseph P. Graham, president of the Paige-Detroit Motor Car Co.; Robert C. Graham, vice-president; Henry Krohn, general sales manager, and Mr. Valprey.

Requires Only a Moment

Thousands of Retailers in All Parts of the Country
Are Helping Their Friends Among the Jobber
Salesmen to a Position of Prominence

In the \$2,075.00 Popularity Contest

Are You Voting?

Use the Coupon in This Issue of Motor Age

Send Your Vote to the Contest Editor Motor World Wholesale

A PAIR of shears to cut the coupon, a fountain pen or pencil to fill in the name and address of that favorite jobber salesman from whom you purchase automotive products—and you are helping a good man toward his goal in the *Motor World Wholesale* popularity contest.

Voting began on July 1. Since then coupons have regularly appeared in the issues of *Motor Age*, *Automobile Trade Journal*, *Commercial Car Journal* and *Chilton Catalog and Directory*.

They will continue in all of the above publications up to and including the issues of Oct. 6, 1927.

Up to this time the vote is so well "spent" among the many candidates in all sections of the country that no one can hazard a guess as to who the probable one, two, three men will be, in any of the nine zones—much less the probable winner of the special \$500.00 Grand Prize.

Total cash to be awarded \$2,075.00.

First, second and third prizes of \$100.00, \$50.00 and \$25.00 to the one, two, three men in each of the nine zones.

Here are the nine voting zones:

NEW ENGLAND: Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, Connecticut.

MIDDLE ATLANTIC: New York, New Jersey, Pennsylvania.

SOUTH ATLANTIC: Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

EAST NORTH CENTRAL: Ohio, Indiana, Illinois, Michigan, Wisconsin.

EAST SOUTH CENTRAL: Kentucky, Tennessee, Alabama, Mississippi.

WEST NORTH CENTRAL: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

WEST SOUTH CENTRAL: Arkansas, Louisiana, Oklahoma, Texas.

MOUNTAIN: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada.

PACIFIC: Washington, Oregon, California.

Zone first prize winner who receives more votes than any other zone candidate will be awarded the special Grand Prize of \$500.00. This will be in addition to his zone first prize of \$100.

Due to the fact that the voting has been so spread out and general it is anybody's race.

It's not too late to start any candidate.

You are urged to use the coupon herewith. Put it to work for some efficient jobber salesman. Help him to a deserved place in the wholesale salesmen's Hall of Fame.

MOTOR WORLD WHOLESALE

Popularity Contest for Wholesale Salesmen

Contest Editor
Motor World Wholesale
Chestnut and 56th Sts., Philadelphia

In the wholesale automotive salesmen's popularity and efficiency contest I vote for:

Name of salesman

Name of his firm

His firm's address

Your signature

Your firm name

Address

M. A., August 25—This ballot is for ONE vote.

WHAT KIND OF AN ANIMAL IS THE PUBLIC GARAGE?

(Continued from page 37)

there are dwelling houses adjacent to the garage even though the district be not a residential district, the garage is liable to become a nuisance on account of the manner in which gasoline is handled at the garage, or the quantity in which it is stored on the premises, said the Court.

The following is a clear case, but was actually adjudicated in a New Jersey court, *O'Hara versus Nelson*, 63 Atlantic 836: The garage was attacked by an injunction to restrain it from storing gasoline in the building. The garage was a frame building with frame buildings on three sides. The garage owners had a permit from the city to store one barrel of gasoline in their building. They had the care of several automobiles the tanks of which usually contained gasoline. Such conditions the court found to render the garage a nuisance and ordered the defendants to store the gasoline outside the building to fill the gasoline tanks outside the building, and to empty such tanks before storing the automobiles in the building. By imposing such a restrictive order against the garage the court thought it had minimized the danger "to the point where, under the necessities of the case, the complainants and others must endure the remaining risk."

The reader will note that in the above case the garage was not a nuisance from its location, but became a nuisance by its careless manner of handling gasoline, thereby increasing the fire hazard. The flagrant case brings out another point of greater importance that the courting of legal process and resulting restraining order called an injunction, illustrating most strikingly the "ounce of prevention" theme introduced above. It is this: When the term "careless manner of handling gasoline" was used above that implied negligence on the part of the garage owner in question or his employees and servants. Should that have happened which was feared by those bringing the injunction suit, had a fire started from so handling the gasoline, burning the surrounding buildings or other property, the garage keeper might have been held guilty of negligence in causing the loss by fire or explosion and held liable for all the damages resulting.

Let us hope that few garage owners would take such short-sighted views of their businesses as to run such risks as those in the above case. We could hope that none would, but that would be a foolish hope, being entirely too optimistic, as the cases reaching the courts are widespread, while a far greater number of instances go unnoticed or are kindly tolerated.

A garage may be enjoined as a nuisance where it permits foul odors and obnoxious gases injurious to the public health, but evidence of such facts would have to be positive and convincing as against theorizing and speculation. The rule is that since the garage business is a necessity to the comforts and enjoyment of life, the public must put up with its necessary accompanying discomforts. Wherever a garage is placed it will be enjoined as a nuisance if it is operated in a manner to injure the health of people living in the neighborhood or who have a right to come into the neighborhood. This is a broad fundamental rule applying to any business. So it is possible to enjoin a garage where hoodlums gather and engage in boisterous and vulgar talk, or where liquors are used causing disturbances to the peace of the neighborhood. But these things apply to the operation of a garage.

The most widespread objection to garages is from locating the same in a residential neighborhood. But as business is continually encroaching upon the residential section, pushing out slowly but surely, the dividing line between the business section and the residential section is continually changing. Some property owners desirous of selling their property at advanced prices or desirous of converting same into business of their own, are favorable to the change. Certain small and apparently harmless shops are permitted, then larger industry comes until the whole character of the locality is changed. On this border line of change, the particular facts must be examined to determine whether the neighborhood is such as to permit the location of a proposed garage. Sometimes the line becomes so uncertain that only the decision of the court can determine one's right after all objections of opposing parties are heard. So a garage is not necessarily a nuisance even when constructed on land abutting on a boule-



Another excellent type of garage and service station. The window arrangement of this building is especially good

vard. (*Stein versus Lyon*, 91 App. Div. 593, a New York case.) But where the results from the operation of a garage are entirely problematical a court will not restrain the establishment of such garage by injunction, unless such location was otherwise expressly prohibited to it. This rule was laid down in another New York case, that of *Sherman versus Livingston*, 128, N. Y. Supp. 581.

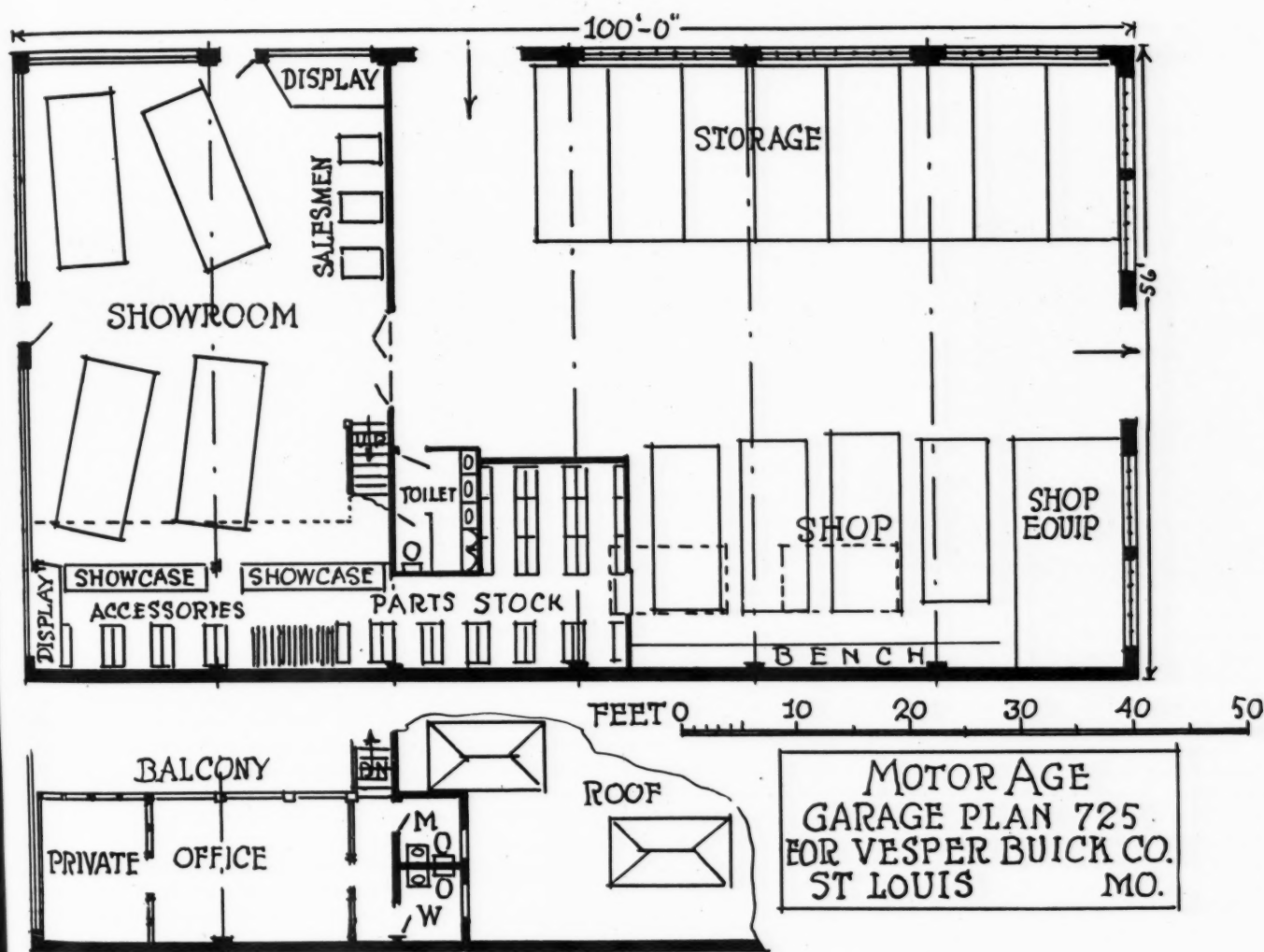
Neither will the courts enjoin the erection of a garage on a street much used for business vehicles, street cars, trains and trucks, where property is more valuable for business than residence purposes, so the Michigan courts decided in the case of *Lansing versus Perry*, 216 Michigan, page 23. But the courts did enjoin the operation of a garage as a nuisance where it was built in a first class residence neighborhood, within a short distance of churches and parochial school, and where it would necessarily create noises, odor and dangers, thereby interfering with church services, increase insurance rates, cause the value of nearby property to deteriorate, and tend to cause persons to remove therefrom. This is the Pennsylvania case found in the 101 Atlantic Reporter 826.

Municipal regulations concerning the erection and operation and location of garages have been held generally to be legal. Such regulations will be dealt with in the several articles that will appear in the continuance of this series.

A Very Well-Balanced Home for a Buick Dealer

With Office on a Balcony, a Spacious Showroom, an Accessory Store and a Garage Having Good Storage Space

By Tom Wilder



The little extra width over the necessary 50 ft. gives a good arrangement in the rear and makes the side accessory store with balcony above possible

ON several occasions you have published in MOTOR AGE plans for buildings containing salesroom and space for a garage.

We have a dealer who is to build a new building one story in height on a lot 56 x 100, the 56 ft. being on the main street facing west; the 100 ft. is on the side street with an alley in the back.

We would appreciate the kindness very much if you would make some suggestions for a suitable salesroom and service station on a property of this

size.—Vesper-Buick Auto Co., Grand Ave. at Lindell, St. Louis, Mo.

WE are making a suggestion for the layout of your dealer's 56 x 100 ft. building on a corner but it may be the wrong corner as you didn't say whether the side street is on the north or the south. This makes very little difference, however, as the plan would work just as well if reversed.

In order to gain space for the showroom without cutting down the garage

and repair shop, the office is being placed on a balcony under which an accessory store with showcases and steel shelving will work in very nicely. The office toilets are also on the balcony but built out partly over the roof of the garage which is not so high as the showroom roof.

The accessory man will also be parts stockkeeper and can either sell at retail or deliver parts to shop.

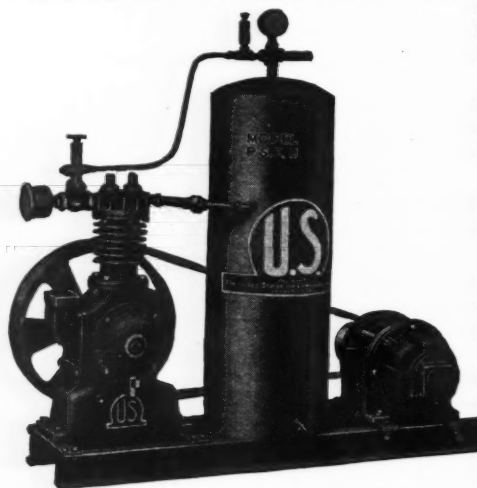
The garage has a good storage space with a drive-through from side street to alley.

MOTOR AGE
GARAGE PLAN 725
FOR VESPER BUICK CO.
ST LOUIS MO.

New Accessories and Devices

One Gun Paint Spray Unit

THE United States Air Compressor Co., Cleveland, is announcing some special low pressure and low priced, one gun paint spray units which will be marketed at a net dealer's price of from \$151.60 to \$211.60, depending upon the current specifications of the motor and type of mounting. The PSE-11 completely assembled unit consists of a 3 by 3½ single cylinder air compressor, automatic unloader for working pressure from 10 to 100 pounds, intake silencer and filter, 1½ hp. motor, high quality prestretched leather belt, 12 by 36 (18 gal.) best constructed tank with



safety valve, gauge, and fittings, all compactly mounted on a steel base in such a manner that the motor can be quickly moved backward to tighten belt. Unit has a displacement of 8 cu. ft. of free air per minute.

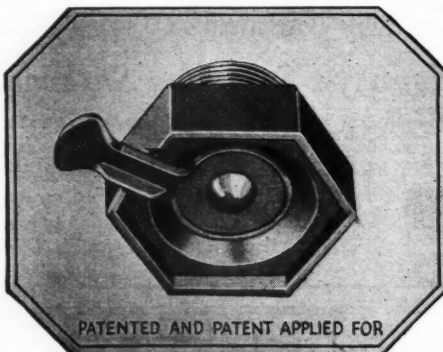
The PSE-10 unassembled includes all items listed under PSE-11 except steel base, but including motor rails for mounting on wooden plank or floor by customer. Complete installation instructions furnished with each shipment.

In view of the increasing field for spray painting, the newest addition to the U. S. line is expected to receive favorable attention in the trade.

Crankcase Drain Plug

THE Franklyn one-second crankcase drain plug, manufactured by Franklyn Mfg. & Sales Co., Long Branch, N. J., replaces the ordinary drain plug on either the Ford or Dodge car and Graham Brothers truck. The manufacturer states that plugs to be used with all other makes will soon be available.

To use this plug it is merely necessary to replace the old drain plug with it. The plug is quickly installed and after that may be operated at any time with a touch of the finger, doing away



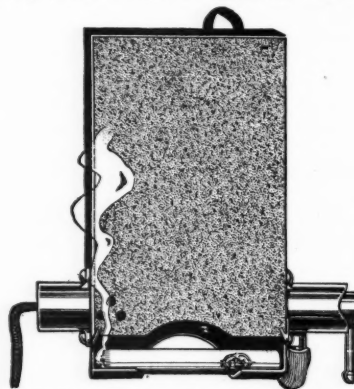
with the necessity of using wrenches and making a neat, quick job of draining the crankcase whenever necessary. Cannot open accidentally.

This item which sells at \$1.50 list for the Ford size and \$3.50 for the Dodge and Graham, is attractively boxed in a dozen units.

Cigarette Container-Lighter

THE Matchless cigarette container and lighter, a most novel and practical automotive accessory manufactured by The Koofast Radiator Co., 3120 Monroe St., Toledo, Ohio.

Extremely small and compact, the Matchless container-lighter attaches to any spot on the dash that is convenient to the driver, delivering a lighted cigarette by simply turning a small lever. It is extremely simple in construction and can be quickly attached by anyone. Automobilists who have experienced the difficulty of locating their cigarettes and lighting matches in the breezes will readily appreciate the convenience and safety which the Matchless container-lighter affords, as the driver can instantly have a lighted cigarette without



letting go of the wheel or taking his eyes off the road. This device is finished in crystallized frosted black with nickel trim.

Wrench Display Stand

THE Husky Wrench Co., Milwaukee, has just brought out a wrench set display stand of most rigid construction, finished in an attractive color

combination. It displays the most popular husky sets such as the No. 599 mechanic set, No. 190 utility set, No. 955 garage set, No. 395 heavy-duty set, No. 512 giant set and the No. 494 dual set, which represent a complete range of assortments to fill the requirements for any socket wrench need.

Accelerator Pedal

THE Grant accelerator pedal is made by the Grant Auto Appliance Co., 2415 West Fourteenth Street, Chicago. Flexible rubber, that responds to the slightest touch of the operator's foot, is used in its construction. The rubber also relieves the fatigue on foot and leg muscles and gives instantaneous action. It also furnishes a good grip for the



shoe sole, and the flange at the heel tends to make the foot more secure on the accelerator. This pedal is artistically designed, durable and may be easily attached to the floorboard with common wood screw in a few moments.

Pedals are packed in individual cartons, 10 of which make a dealer package, with advertising display material, or may be had 100 pads in a standard shipping container, the weight of which is 95 lb. List price, \$1.00.

Garage Jack

THE MAYO garage Jack is designed to handle cars having balloon tires, without special adjustment of the jack. Heavy-duty 8 in. roller bearing wheels are used, which make the jack easy to roll with or without load. The body of the jack is 4 ft. long, which makes it possible to reach the axle regardless of bumpers, gas tanks, and other obstructions, while the 40 in. handle provides excellent leverage.

Three position adjustments are located in the handle and a standard ratchet and rack arrangement is used with a foot-lever pedal to control the moving direction of the head.

The handle operates a standard jack mechanism such as has been used successfully in railway work for years. This mechanism is connected to a sliding head by a strong chain which will last for many years.

Offered the Automotive Trade

Hose Clamp

A CLAMP embodying unusual features is now being put on the market by the National Clamp Co., 16 East 41st St., New York. It is stated that the features which make the National clamp of particular interest to users are its simplicity, the speed with which it may be applied or removed and the fact that one size will fit a wide range of hose sizes.

In applying the National clamp, the band is slipped over the hose and compressed by hand. The screw is then swung into position, as shown in the accompanying illustration, and a few turns with an ordinary screw driver tightens the band. The screw, of heavy



brass, operates on the principle of a worm drive, feeding the band under the screw threads until it is as tight as desired. It is claimed that with an ordinary 6-in. screw driver the hose may be so tightly clamped as to make it impossible for it to be blown off and that any one can apply or move it in a few seconds.

These clamps are made in four sizes: Nos. 10, 20, 30, 40, which make it possible to fit hose from 1 in. up to the largest size used in gas or steam connections.

Tire Cover

EACH Ziptite tire cover is equipped with two genuine hookless fasteners sewn in across the tread at opposite points on the cover. When the fasteners are opened, the tension of the springs on the back of the cover is released, the cover is opened on each side and slips on and off with ease. To apply the cover it is merely necessary to lay it in position with the hookless fasteners open and then "zip" them tight, which easily closes the sides

and tightens the steel wire coiled springs that stretch the cover smoothly and evenly all around the tire. Manufactured by Automotives, Inc., Newark, N. J.

Automatic Valve Rotator

THE TREMBLEY automatic valve rotator, manufactured by Valve Rotator Corp., 621 W. Washington St., Los Angeles, is designed to rotate the valves of the engine constantly, making it impossible for them to continue to seat in the same place and eliminating the accumulation of dirt and carbon, thus preventing pitting. The device also cleans the valve stems in the guides, preventing warping and sticking.

The rotator is a ball bearing device which is installed in place of the spring washer. Nothing else is added or removed. The simplicity of construction, which is in effect a series of ball bearings encased between two specially designed ball races, insures continuous, trouble-free operation.

The advantages claimed for this device as a result of its valve grinding properties, are decreased fuel consumption, greater speed and quicker getaway. List price, for passenger cars, 60 cents per valve.

Capsule Radiator Cement

NOLEEX marketed by the Noleex Corp., 68 Hunters Point Ave., Long Island City, N. Y., is a patented radiator cement put up in capsules, the complete capsule being dropped, unopened, into the radiator of the car. The claim is made for this product that it never deteriorates or loses any of its strength and works efficiently in radiators using alcohol or any other anti-freeze compound. List price 60 cents.



Power Tire Spreader

THE Weaver power tire spreader will handle balloon and high pressure tires in all sizes from the smallest up to and including 10½ in. balloon tires.

High pressure and balloon tires are handled with equal facility, without the need of making any adjustment.

The ease with which this spreader spreads the large, heavy tires used on commercial cars makes it especially valuable to shops which service truck and bus fleets.



In order to inspect the casing, the tire is placed on the spreader, resting on the buffing plate and over the roller. This roller supports the tire and enables the operator to revolve the tire easily from time to time to inspect a new portion. The arm on which the roller is mounted is held in position by a tension spring, which allows the arm to be forced down as the tire is spread. Made by Weaver Mfg. Co., Springfield, Ill.

Utility Socket Wrench Set

THE Husky Wrench Co., Milwaukee, has just added the No. 190 utility set to its line of socket wrenches. This set has a complete range of socket wrenches plus three socket screw-drivers, three sizes of screw-driver bits and a speed screw-driver handle with swivel grips. The set is packed in a compact, black enameled metal box.

All units are heat-treated and nickel-plated. This set is claimed to build up more than 600 wrench and 300 screw-driver combinations.

READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

What Speed Will a Car Stand

Are any data obtainable giving rate of depreciation, or wear and tear on automobiles at different speeds, showing at what speed depreciation increases disproportionately to the distance driven.

If four cars of good make are driven at say 30, 40, 50 and 60 miles per hour, respectively, how much will the mileage life be shortened and the up-keep increased on those driven faster than the first, or the first and second, etc.?

If you can tell me, or put me next to somebody's bulletin that will tell it, I will greatly appreciate it.—E. W. Voorhis, 1104 South Santa Fe Ave., Salina, Kan.

THE strain on the reciprocating parts increases as the square of the speed. That is, the strain on pistons, pins, rods, connecting rod bearings, etc., of a car driven 60 miles an hour is four times as great as the strain on these parts in a similar car driven at one-half that speed or 30 miles an hour. However, this does not mean that bubbling the speed of any car is necessarily going to give it only one-fourth of the mileage that it would otherwise have.

The size of the bearings and the weight of the different reciprocating parts has much to do with it, as has also the design of the lubricating system and the quality of the oil used.

In the recent Auburn endurance runs which were conducted at very high speed on the Atlantic City Speedway, the cars were performing beautifully at 70 miles an hour, but when the speed was put up to 72 or 78 miles an hour for any great length of time it seemed that a critical speed had been reached and mechanical difficulties began to develop. However, these cars covered 15,000 miles at a speed of approximately 62 miles an hour. This, of course, included all stops, so naturally the speed at which the cars were actually run was considerably above this speed.

Snubbers Not Wanted

Some time ago we read in some magazine about a Ford dealer who made a bucking bronco out of a Ford car by placing the wheel hubs out of center.

We have been considering fixing a car in this way to use at our County Fair and thought that you might know of some dealer who has had an experience of this kind. If you can give us any information on this we would appreciate it.—Pottinger Sales Co., North Manchester, Ind.

WE do not know the name and address of the dealer who fixed the Ford up the way you mention, but we have heard of this stunt being done. The general procedure is to secure some wheel about 2 inches larger than the

regular Ford wheels, then lay the fellow of a Ford wheel on the larger wheel after having removed this fellow and be sure that the rim is about 2 inches off center. We would not suggest putting it farther off center than this, for the reason that a 2 in. off-set gives a 4 in. motion which at 15 to 25 miles an hour will produce ample bucking to satisfy anyone. This rim and wheel work is quite a little job in itself, and it may be well to call in the services of a blacksmith who is qualified to construct

Silent Knight

Please tell me why a Knight engine does not knock when it has a heavy carbon deposit.—Anthony F. Krupinski, Box 392, Webster, Mass.

THE main reason that a Knight engine can stand so much more carbon than some other engines before objectionable detonation is noticed, is due to the relatively low compression ratio of a Knight engine as compared to the others.

wheels. He will probably have a spoke pointer which looks about like an ice cream cone, only smaller, and has a knife on the inside of it. This tool is held in a regular carpenter's brace, and by means of this equipment the ends of the spokes can be tightened. Then remove the hub from the over size wheel, bringing the spokes up somewhat and forcing them into place in the regular Ford wheel. Install the regular Ford hub and the job is done.

Speeding Up a 1924 Chrysler

We have a 1924 Chrysler Model B Imperial sedan which our customer wants pepped up. Can this cylinder head be planed or milled down to give a 6 to 1 compression ratio, which would be equivalent to the new Red Head engine? Would it be necessary to install new distributor or to change the ignition timing, or the timing of the valves? If this plan is feasible, how much material should be removed from the head? Many thanks to the "Old reliable" for the forthcoming information.—G. C. DuVall, Fennville, Mich.

BEFORE removing any material from the cylinder head, check to be sure that neither the pistons nor valves would strike against cylinder head. We do not believe that $\frac{1}{8}$ in. would be too much to remove from this head, provided the good anti-detonating fuels that are available today are used. Of course, if it is found that $\frac{1}{8}$ in. gives too high compression, an extra gasket can be added without much trouble. You will probably need Silchrome valves if the car is to be driven

hard. Also a different ignition unit, which can be obtained from the Chrysler Co., will be needed.

Burning the Crankcase Drainings

I have been a constant reader of MOTOR AGE for a number of years and I would like to put a question to you regarding the burning of crankcase drainings. I have a large amount of this oil always on hand, but have never had much success in using it, even though I have used it somewhat after the methods suggested in MOTOR AGE.

Now, I am wondering if you can tell me how to handle this oil so that I can depend on it and at the same time feel safe to let it burn all night, as we keep a fire here at the station all night during the winter. My stove is a big, cast-iron 20-in. "Frost Killer" and is very convenient for me to attach the air compressor if necessary.

I have had several suggestions from people who say they have used crankcase oil, but when I try to get details they somehow just don't seem to remember. That is why I am asking you for details on how to handle and how to burn this kind of fuel.—W. E. Bechtie, Bill's Service Station, Deerfield, Kan.

WE believe that you will find just the details that you want with regard to the handling and burning of waste oil, if you will refer to page 14 of your May 26, 1927, issue of MOTOR AGE. Here Tom Wilder has written a story summing up practically all of the information which we have available on this subject of utilizing crankcase drainings. If you do not have a copy of this issue, let us know and we will see what we can do to fix you up with one, though this particular issue is very scarce. Also, if there is anything else, or any specific question that you wish to ask in connection with the information given in this story, feel perfectly free to call on us at any time.

Close Point Setting is Needed

I have an elusive one on an early Nash light six. Several of the best mechanics in Chicago have been stumped by the following problem.

The engine in the car that is causing us trouble cuts out at fairly high speed, about 25 miles an hour in second and about 40 miles an hour in high. The engine, however, must be thoroughly warmed up before the trouble is noticeable. My first thought was that the trouble was in the ignition, but after seeing no apparent clue in the ignition system on the car, a new coil and ignitor was tried just for luck. Then we put on a complete, new Remy system, including coil, condenser and distributor, everything new but the high-tension wires. The wires were not replaced because they hang in the air and could almost be bare and still work. The whole engine has been sprayed with Duco, but changing the coil and distributor should take care of any trouble from that source.

Before the second change was made in the ignition, a new Carter carburetor was tried

READERS' CLEARING HOUSE

in place of the Stromberg that was on the car when the trouble first began. That merely seemed to lower the speed at which the missing occurred.

The valves and seats were then carefully faced and ground, cutting the seats down to 1/16-in. in width. Lindbloom valve packing was installed on the intakes, and all tappet clearances with the motor running, are a good .005 in. The plugs were new 1500 miles ago, so we have cleaned and spaced them at .027 in. Since the valve job was done the engine is snappier, but will miss erratically at high speed just as before. At top speed it seems to be a little better but of course, it is pretty hard to pick out a miss at about 3500 r.p.m. When the engine speed diminishes, there are explosions in the muffler similar to what is heard when valve springs are very weak. The valve springs have been replaced in this car, although the old ones appeared strong enough. No. 1 cylinder shows about 65 lb. pressure, while the others all come around 69 lb. However, I do not believe that that slight variation would account for a definite miss the same as was noticeable before the valves were ground. What do you suppose I have overlooked?—Theodore R. Farington, 2522 W. Marquette Rd., Chicago, Ill.

EVEN though your ignition wire may appear to be in perfectly good condition, and even though it may be in contact with metallic objects at only a few places, it would probably be worth while trying new wiring, as leakage in the high-tension wiring often causes troubles that are very difficult to trace.

Another possibility is that the points are set a little too wide for high speed operation. We would suggest setting these points at about .018 in. The recommended opening is between .020 in. and .025 in., but for high speed operation it is better to have them a little closer together. We would also suggest that you try a heavier spring in your interrupter contact arm, as this will give a more positive make and break even at high speed. If the shaft that carries the breaker cam in the ignition unit has any appreciable side play, this will also cause trouble. The side play in this part should not exceed .005 in.

Split Field Operation

Will you please explain to me through the Readers' Clearing House Section of MOTOR AGE, the difference between the conventional third brush type of generator and the new split-field type.—Anthony F. Krupinski, Box 392, Webster, Mass.

IN order to explain the difference between the typical third brush and

the third brush generator with split-field, we are showing a diagram of each one. You will notice at the left of this diagram, the wiring of a typical third-brush generator. Here the field circuit is so arranged that the current must go through the entire field winding in order that the circuit be complete. Such is not the case in the split-field type of third brush regulated generator as shown at the right. Here there is a plain shunt field whose circuit is broken by means of a thermostat without a resistance when the temperature of the generator reaches a predetermined point. This, of course, immediately reduces the output of the generator.

Trade This

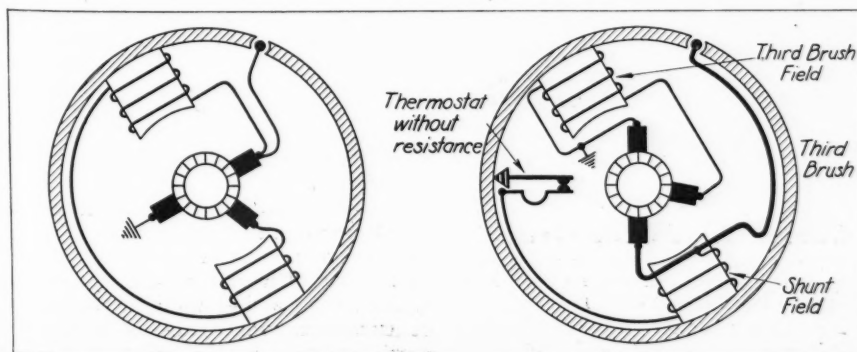
I have several rolls of brake lining that are too wide for general use. Will it be all right to cut this to the proper width, or will it ravel out?—Marion W. Martz, c/o W. C. Franke Garage, Fort Wayne, Ind.

YOU are on the right track when you suspect that this lining would probably ravel out if cut. We would suggest that you try to arrange a trade on this with some other garage or fleet operator near you. It is quite possible that some truck operator in your vicinity could use this to advantage, and we feel that that would be much better than trying to make use of it by cutting it down.

Supercharger Data in Back Issue

Will you please inform me as to where I can procure a diagram of a supercharger, as I am interested in the principles of their operation? Any information concerning superchargers will be appreciated.—H. A. Counts, Olive Hill, Ky.

WE would suggest that you refer to page 47 of the July 14 issue of MOTOR AGE. On this page is a diagram showing both the centrifugal and the positive type of superchargers, as well as a chart of performance of a Miller 91 cu. in. racing engine, both with supercharger and without a supercharger showing the difference in operation.



Sounds Like an Air Leak

We had a Packard straight eight in our shop the other day that would miss and jerk at low speed. However, when a speed of 15 miles an hour or more was reached, the car would work very nicely. We ground the valves, checked the ignition, put in eight new plugs, checked the timing, but this did not remedy the trouble. Is there an adjustment on the carburetor on this car? And if so, what is it? Anything you can do to help us clear this up will be very much appreciated.—Bill Stotlar, The Stotlar Motors Inc., Christopher, Ill.

THE trouble that you have sounds very much like poor compression or an air leak in the intake manifold. We would suggest running this engine at the speed at which it misses and while the engine is running go over the manifold with an oil can filled with gasoline, squirting the gasoline on all joints and gaskets between the carburetor and the cylinder block. If there is an air leak the gasoline will be sucked into the engine and you will immediately note a difference in the performance. It would be well to try the compression of all cylinders by slowly turning the engine over with the hand crank, and if one or more cylinders are noted on which the compression is poor, the valves should be ground again, or the rings replaced as needed in order to have uniform compression on all cylinders. Another possibility that occurs to us is that the breaker points may be set too close. The proper setting for these points when fully opened is between .015 and .020 in. The gasoline enters the float chamber of the carburetor through the inlet strainer, which should be cleaned occasionally. A constant level or supply of gasoline is maintained by the float, thereby regulating the height of the gasoline in the two-stage spray nozzle which is directly connected with the float chamber. The gasoline flows into the float chamber through a needle valve, automatically operated by the action of the float. Pivoted balance levers resting on the top of the float open and close the needle valve according to the movement and position of the float. The mixing chamber is a cylindrical passage in which the gasoline atomizes and mixes with the air before being drawn into the manifold. The gasoline, after leaving the float chambers, enters the spray nozzle, which is located in the center of the mixing chamber. The suction created by the pistons causes air to enter the mixing chamber through both primary and auxiliary air inlets. In passing around the spray nozzle the air draws the gasoline from it, atomizing and mixing the mixture. The primary air intake contains a shutter, which is normally open and not in use when running. This shutter is operated by the carburetor control on the instrument board, which also operates the auxiliary air valve and is used to choke the motor for starting when cold. By pulling the carburetor control all the way out, the auxiliary air intake

READERS' CLEARING HOUSE

is completely closed and the primary intake practically closed, allowing a very rich mixture to be drawn into the cylinders. The control should be pushed in, at least part way, as soon as the motor has started firing. The auxiliary air valve is in a housing forward of the mixing chamber and is controlled by the tension of two springs, one within the other. At low engine speed most of the air is admitted through the primary air intake around the spray nozzle. To prevent too rich a mixture at greater throttle openings, the auxiliary air valve is opened because of the increase in suction. This carburetor automatically produces a more nearly correct mixture for all engine speeds, than could be obtained by manual control. The normal running position of the carburetor auxiliary air valve is attained when the carburetor control is against the instrument board.

In view of the fact that the gasoline openings are of a fixed size and that there are no adjustments, the only possibility for trouble in a carburetor of this kind is that some dirt has worked into these openings and is hampering the flow of gasoline.

Bleeding Lockheed Brakes

Will you kindly send us instructions for bleeding the brakes on a Model 1925 Chrysler?—Petersen Bros., Durant, Iowa.

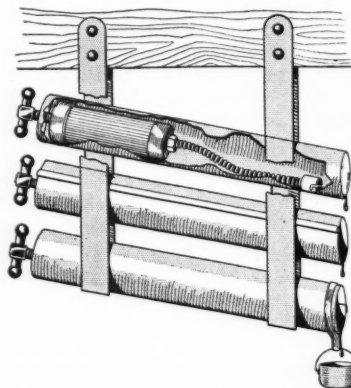
WHEN it is known that there is air in the brake line the cap screw at the top of the wheel brake cylinder, as shown in the illustration as Type No. 51532, should be removed. The bleeder nipple and hose which is a part of the car tool equipment should be attached to the bleeder valve in the wheel cylinder with a small open end wrench. The bleeder valve should be open from one-half to three-quarters of a turn, but not completely removed. One end of the rubber tubing should be slipped over the hose end of the bleeder valve and the other end of the tubing laid into a clean and dry container, preferably a pint bottle. The latter should be resting on the floor. With foot pressure removed from the brake pedal the valve in the supply tank should be opened by turning the handle to the left until it is free to move up and down. By means of this handle liquid should then be pumped into the system to force the liquid out of the brake drum cylinder into the container.

After about one-half pint of liquid has drained from the system and it is observed that air bubbles still remain in the liquid coming out of the rubber tubing, the bleeder valve should be closed and the cap removed from the supply tank. The liquid drawn from the system should then be poured back into the supply tank. This operation should be repeated until no more bubbles appear. It is usually necessary to apply this operation on all four brake cylinders to insure that the air is re-

SHOP KINKS

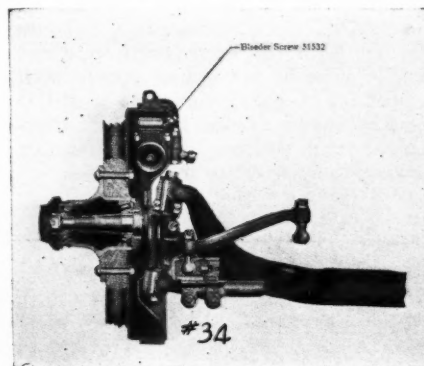
Ideas that have proved useful

TO have a place for grease guns where they will not be dripping grease all over everything I get several lengths of 4 in. tin pipe at the tinner's. I then solder these pipes to a couple of strips of tin and hang them up at an angle. A pail hung as indicated in the sketch will catch the drippings and the grease guns then have their own place and are out of the way.—Irve R. Hammett, The Hammett & Du-chene Garage, 533 S. Front St., Mankato, Minn.



Readers of MOTOR AGE are invited to submit ideas that they have found useful in doing some particular service job in the shop in a better or quicker way. For each one published \$2.00 will be paid. Whenever possible the idea should be accompanied by a sketch or diagram from which a drawing can be made.

moved from all lines. It is always necessary to bleed the lines to remove air from the system, after disconnecting one of the brake cylinders for removal of axle parts or if a connecting pipe should break.



Curtis OX Firing Order

Please give me the firing order of the Curtiss OX5 engine.—Glen Engelman, 204 East 4th Street, Spring Valley, Ill.

THE firing order of the Curtiss OX engine is as follows: Cylinders are numbered from the magneto end of

the engine toward the propeller—No. 1 being the first cylinder on the left-hand side. No. 2 being the first on the right. In other words, the left-hand cylinders are numbered 1, 3, 5 and 7—and the right-hand cylinders are numbered 2, 4, 6 and 8. The firing order is 1, 2, 3, 4, 7, 8, 5 and 6.

Electrical Service Equipment Requirements

Please send me information in regard to the equipment needed for making starting, lighting and ignition tests both on the car and when removed from the car.—Circuit Electric Co., 1218 Wellington Ave., Chicago, Ill.

ELECTRICAL tests on the car can be very nicely handled with the aid of a low-reading voltmeter and ammeter, which, with the aid of shunts, can be used for reading the current required by the starting motor. The voltmeter should have a scale of .3 volts, 3 volts and 30 volts. The .3-volt scale would be used for finding bad connections, such as corroded terminals or loose contacts. The voltmeter when performing this service would be shunted across the suspected terminal when it was carrying current and if a reading were noticed it would indicate a poor connection. The 3-volt scale would be very handy on general battery inspection and repair work; while the 30-volt scale would be used for checking the total voltage of 6 and 12-volt units of different cars. The ammeter would be convenient for carefully checking the output of the generator and the consumption of the different electrical devices on the car. The high-reading ammeter would, of course, be used for testing the starting motor circuit. On the ignition system the low-reading ammeter would be handy at times for testing the current required by the ignition coil.

The testing of units off of the car can be very nicely handled by the use of one of the complete test benches, which are now offered on the market. These benches have electric motors for running the generator at all speeds. The generator is held in a clamp and connected to the motor by means of a universal coupling. A rheostat makes it possible to operate at any speed, while meters on the bench indicate the amount of current going to the battery and also the voltage at which the generator and cut-out opens and closes. For the purpose of making starting motor tests, there are spring balances, torque arms and a starting switch with cable. Current is drawn from the test bench battery for the purpose of running the starting motor. Ignition units are driven by the same motor that drives the generators and by means of spark gaps, the performance of any unit can be proved before it is installed on the car. The use of such a piece of equipment is a big thing in the sight of customers who judge a shop primarily on the basis of what it has to work with.

READERS' CLEARING HOUSE

There is one manufacturer of such equipment right in your city and we are giving you his name and address by separate letter and would suggest that you see what he has to offer in this line.

I would also like your comments with regard to having replacement parts in stock, and I would like to know if these parts can all be obtained from one supply house, and if so, would the parts be of genuine manufacture?

You can get your supply of genuine parts from relatively few sources, the names of which will be given by separate letter.

An Old Timer to the Front Again

I have an old 1917 Maxwell with double wiring system. It has a 12-volt motor generator and I have been trying to get a 6-volt system for this car, but failed to find one. How can I wire this up with less wires and yet with the same 12-volt generator? This has puzzled several mechanics.—Chevrolet Service Station, Cherryvale, Kan.

IT is not possible to change this system over with simplified wiring and yet retain the starting characteristics. Due to the great amount of interest in this old car and electrical system, we are showing a wiring diagram which can be used for changing this system over to 6-volts, but doing so eliminates the starter. The generator will charge the 6-volt battery satisfactorily, provided sufficient resistance is placed in the charging circuit to prevent too much current going to the battery. In the diagram you will note that the system as shown has a different lighting and ignition switch than is regularly furnished. It is possible to use the original Maxwell voltage regulator and cutout and the original Maxwell ignition and lighting switch. A recommended change is shown in the part of the diagram that is referred to as the two-gang switch for regulator. The back

of this switch is equipped with two small coils of iron wire to be used as resistances in series with the generator field. The object of this is to have resistance which can be thrown in or out of the field circuit so that the battery will not be overcharged at high speed, or when the car is used on long runs. The movement of these buttons, of course, must be done manually and will require some attention therefore, from the driver. The reading on the ammeter will determine when the button should be moved to change the output. Pushing the buttons in, thus closing the circuit, will raise the output, as this cuts out the resistance. Pulling the button out throws the resistance into the circuit and will naturally reduce the output. If, by chance, the regulation is not sufficient with both buttons out it will be necessary to try coils made with smaller wire or else with a greater length of wire. The length of wire in the upper coils should be twice that in the lower coil, for best regulation, with the greatest variety of possible regulating conditions.

Shorts Removed by Burning

We are having an argument regarding the machine that charges Ford magnetos on the car. They tell me that this machine while charging a magneto, will burn a nail or cotter key from $\frac{1}{4}$ in. to $\frac{3}{4}$ in. Please state if this would be possible without burning the field coils on the car. Also state what voltage this machine produces and how the current flows when charging the magneto.—Montana Subscriber.

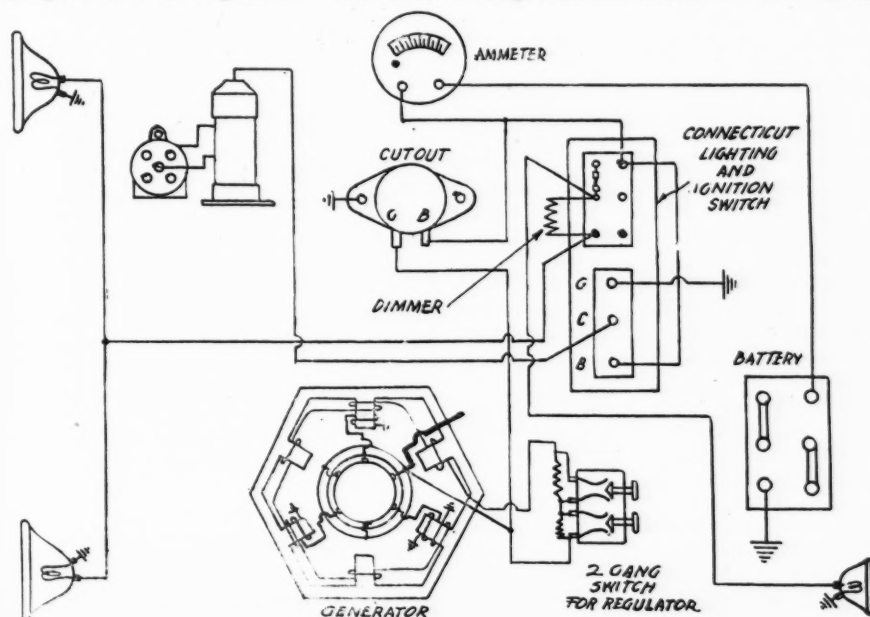
RECHARGING Ford magnets without removing them from the car is accomplished by sending direct current through the magneto winding. Whatever the source of current supply is, is of little consequence, provided 24 to 32 volts of direct current are available. This may be had either from a number of storage batteries, or from an alternating current rectifier. This would

not burn off a piece of iron as large as $\frac{3}{8}$ -in., though it is likely that pieces of cotter key, or other small parts that might get into the Ford engine, could be burned out without injuring the winding.

As the Ford magneto coil has a resistance of approximately $\frac{1}{2}$ -ohm, the amperes that would flow through this winding would be 48 when 24-volt is applied or 64 amp. when using 32 volts. That is provided the current travels the entire distance of the magneto winding. If the short is halfway around the winding, that is, at the bottom of the coil, instead of in the last coil, the current flowing will be approximately twice the value stated. In that event, great care must be used in handling the recharging apparatus for fear of burning out the coil winding.

The customary procedure is to connect to the magneto post with one side of the direct current supply and to quickly make and break the circuit on the frame of the car. While the current flowing is high, the period during which it flows is very brief and as a consequence does not dangerously overheat the windings. The principle here is somewhat the same as that found in heating an electric iron, for example. If we are to snap the current on and off, the current flowing will be as great as though the current were left on continuously, but due to the brief period of time that it flows, the iron will not heat up. However, if the current were left on the iron might become red hot. So with the Ford magneto charging. If the current is not made and broken rapidly, the windings may overheat and burn out. The reason that a cotter key

When the Ford magneto is being recharged the positive terminal of the direct current power source should be connected to the Ford magneto terminal and the negative side should be flashed against the frame. It is highly important that the magnets be in proper position with relation to the magneto winding, however, before completing the circuit. To do this it is well to remove the transmission inspection plate so that you can look at the back of the Ford flywheel. Locate the brass studs on the rim of the flywheel, which hold the magnets in place and have someone turn the engine over very slowly until one of these brass studs is in line with an imaginary line drawn about 1 in. or so from the magneto terminal to the left of the latter and paralleling the frame. In other words, these studs will exactly straddle the magneto terminal. With the flywheel in this position and with a compass held 1 in. to the left of the magneto terminal and about 3 in. back if it, the north pole of the compass should point toward the front of the car. If it points the other way, turn the flywheel the distance of one magnet, so that the next pair of magnet-holding bolts is straddling the magneto terminal.



PURRS AND PINGS



They Go Wild, Simply Wild Over Us

WILD HORSE, WYO.—I say, what have the artists who ply the brush for MOTOR AGE been drinking? Did someone slip mash in their oats? Time was when I turned the pages of MOTOR AGE I saw cars in different states of dress and undress, and parts and perhaps mechanics. But now what with the old woman and her pig, and the dapper magicians who pour rabbits from their high hats, I don't know whether it is Mother Goose or the Country Girl's Confessions I have chanced upon. However, there's something maybe to that variety axiom, leastways we can hardly wait for our next copy here in Wild Horse.—*J. T. H.*

Why ONE of the Best?

GEORGETOWN, TEX.—I have been reading MOTOR AGE for the past eight or ten years, and I consider it one of the best trade papers I have ever read.—*G. C. White.*

Philanthropists, Attention!

ST. PAUL, MINN.—The best magazine published, in my opinion. I wish someone would make me a present of a life subscription.—*Fred H. Scobie.*

Honest, Those Boys Actually Make Money

HOUSTON, TEX.—In some ways MOTOR AGE ain't a bit better than it formerly was. Why do you have those cheer-up stories each week about how so-and-so has done such-and-such a thing and made all that success? If



it's so easy to do it as any of them claims, we could all do it, but believe me boy, it takes more than reading them cheerup stories to enable me to believe that it is easy to make money. But the rest of the book is the nuts.—*jda.*

We Love It

ROCKWELL CITY, IOWA.—MOTOR AGE is fine, and I like it.—*A Hicks.*

LETTERS to the editor from those whose "attention has been called"; from those who point with pride and those who view with alarm, from those who are easy to please and those who are hard to please; from those who are happy when they find a good thing and those who are happier when they find something they consider not so good; from those who boost and those who knock; from those who see the doughnut and those who see the hole; in other words, Dear Subscriber, from you and you and you—as well as from the man who borrows your copy of MOTOR AGE or reads it over your shoulder.

Every Day in Every Way

SIOUX FALLS, S. D.—MOTOR AGE is better than ever.—*J. O. Hanson.*

The Contrary Sex

GEORGETOWN, KY.—MOTOR AGE is scarcely a woman's magazine, women as a rule not being interested in machinery, but I always have to read Purrs & Pings before my husband gets to see the "New Devices" page and the rest of the luscious assortment. It is human to enjoy being on the outside of an argument, so let us see a few more "pings" and try holding back on the "purrs" for a while.—*Mrs. I. M. C.*

This One Didn't

JACKSONVILLE, FLA.—We all agree that MOTOR AGE is all right. But—a magazine that offers as many diversities as does MOTOR AGE must get a lot of slams along with the friendly back-slaps. Unless I see this in print, I will know they only reach the wastebasket.—*L. C. M.*

Pop Labor and Mom Experience

CANTON, OHIO.—I am enjoying MOTOR AGE more and more each issue. You have proved the fallacy of "A trade magazine is not even enjoyed by the trade." There is nothing cut and dried about the articles in your publication. They are not just "brain children" but products of labor and experience.—*J. O.*

A Woman Makes Use of Her Prerogative

LEXINGTON, KY.—I have for some years been a regular reader of MOTOR AGE. Since its removal to Philadelphia I have viewed first with interest and then disgust the radical changes in form and figure. A quiz of questions no one could answer save the fellow who digs them out of the encyclopedia. Bah, all you need now is an unworkable crossword puzzle to be down on the level with the other rotten weeklies. But of course I am "only a woman." My husband sure likes the book.—*L. M. C.*

Peeved But Impressed

ASHLAND, KY.—How do you get like that, filling in a perfectly good book with that stuff someone else wrote long before we young ones in the trade ever saw an automobile? I'm a busy man, and I read MOTOR AGE for the good it does me as well as the enjoyment I get from the news. But I'll say this for those old news items. Before I read them I never knew that the industry and MOTOR AGE wore their swaddling clothes together.—*J. F.*

A Five-Word Mouthful

FENNVILLE, MICH.—MOTOR AGE, the "old reliable."—*G. DuVall.*



Hope You Live to Be 100

BOSTON, MASS.—Having never seen any appreciation of MOTOR AGE from the "hub of the universe" thought I would say a word or two. I am probably one of your oldest subscribers and at no time has the magazine been as good as it is now. Would say in closing keep up the good work.—*Y.deB* (89 years old and going strong.)

What's His Name?

CHICAGO—See you has a story about a Chineese who ran a car agency. One here runs a car laundry.—*H. G. B.*

Prices, Weight and Equipment of Current Passenger Car Models

Important Changes in Specifications and Price Tables since last issue.

CHANDLER CHRYSLER 72 ESSEX HUDSON S

Passengers and Model	F.O.B. Price	Doors	Shipping Weight	Standard Equipment
AUBURN				
24p. Roaster.....	\$1095	2	2	aeghrw
5p. Touring.....	1145	4	4	aeghrw
24p. Cabriolet.....	1295	4	4	aeghrw
5p. Sp. Sedan.....	1195	2	3040	eghir
5p. Sedan.....	1295	4	3080	aeghr
Royal Sedan.....	1795	4	3040	ahmptx
5p. Wand. Sedan.....	1345	4	3040	aeghr
24p. Roaster.....	1395	2	2	aeghmnrw
5p. Touring.....	1445	4	4	aeghmnrw
24p. Cabriolet.....	1595	4	4	aeghmnrw
5p. Sp. Sedan.....	1495	4	3350	aeghmnr
5p. Sedan.....	1695	4	3390	aeghmnr
5p. Wand. Sedan.....	1745	4	3390	aeghmnr
24p. Sp. Rdster.....	1995	2	3180	aeghmnrw
5p. Touring.....	2045	4	3200	aeghmnr
24p. Cabriolet.....	2095	4	3350	aeghmnr
5p. Sp. Sedan.....	2095	4	3380	aeghmnr
5p. Sedan.....	2195	4	3450	aeghmnr
5p. Wand. Sedan.....	2245	4	3450	aeghmnr
147" W.B.				
5p. Touring.....	2295	4	4	aeghmnr
5p. Sedan.....	2595	4	4200	aeghmnr
BUICK				
4p. DeL. Rdstr.....	\$1195	2	2990	ahmnr
5p. Touring DeL.....	1225	4	3040	ahmnr
24p. Coupe.....	1195	2	3110	ahmnr
5p. 2d. Sedan.....	1195	2	3215	ahmnr
5p. 4d. Sedan.....	1295	4	3300	ahmnr
5p. Ctry. Club.....	1275	4	3190	ahmnr
5p. Town Bro'm.....	1375	4	3305	ah
120" W.B.				
4p. Coupe.....	1465	2	3800	ahmnr
5p. 4d. Sedan.....	1495	4	3870	ahmnr
5p. Town Bro'm.....	1575	4	3940	ahmnr
128" W.B.				
24p. Sp. Rdster.....	1495	2	3655	ahmnr
4p. Sp. Touring.....	1525	4	3735	ahmnr
5p. Coupe.....	1850	2	3940	ahmnr

Passengers and Model	F.O.B. Price	Doors	Shipping Weight	Standard Equipment
3p. Ctry. Club.....	1765	2	3905	aghmnor
5p. Bro. Sedan.....	1925	4	4050	aghmnor
7p. Sedan.....	1995	4	4115	aghmnor
CADILLAC				
"Standard" 132" W.B.				
5p. Brougham.....	\$2995	2	4170	aghlnprtx
2p. Coupe.....	3100	2	4105	aghlnprtx
5p. Victoria.....	3195	2	4190	aghlnprtx
5p. Sedan.....	3250	4	4270	aghlnprtx
2p. Sp. Coupe.....	3500	2	4460	Deghklmnp
5p. Sp. Sedan.....	3650	4	4590	Deghklmnp
138" W.B.				
7p. Sedan.....	3400	4	4420	aghlnprtx
7p. Imperial.....	3535	4	4480	aghlnprtx
"Custom" 132" W.B.				
2p. Roadster.....	3350	2	220	aeghlmpnx
2p. Conv. Coupe.....	3450	2	300	aeghlmpnx
7p. Touring.....	3450	4	4285	aeghlmpnx
4p. Phaeton.....	3450	4	4275	aeghlmpnx
4p. Sp. Phaeton.....	3975	4	4705	Beghklmnp
5p. Coupe.....	3855	2	4465	aeghlmpnx
5p. Sedan.....	3995	4	4465	aeghlmpnx
7p. Suburban.....	4125	4	4580	aeghlmpnx
7p. Im. Suburb.....	4350	4	4615	aeghlmpnx

CHANDLER				
"Big Six"				
24p. Roadster.....	\$1695	2	3200	Ahmnrw
7p. Touring.....	1695	4	3360	ahmnrw
5p. Met. Sedan.....	1495	4	3570	ahmnu
4p. Coupe.....	1675	2	3485	ahmno
3p. Ctry. Club.....	1675	2	3435	ahno
5p. Met. DeL. Sed.	1595	4	3570	ahmnotv
7p. Sedan DeL.....	1795	4	3725	ahmnotv
Royal Sedan.....	1795	4	3725	ahmnotv
"Spec. Six"				
5p. Touring.....	945	4	2475	ah
5p. DeL. Touring.....	1005	4	2565	ahw
24p. Rdstr.....	1135	2	2470	ahw
5p. Sportster.....	1145	2	2470	ahw
5p. Sedan.....	995	4	2740	ah
3p. Coupe.....	1035	2	2630	ah
24p. Coupe.....	1135	2	2740	ah
5p. DeL. Sedan.....	1135	4	2740	ah
3p. DeL. Coupe.....	1125	2	2630	ah
24p. DeL. Coupe.....	1235	2	2740	ah
"Roy. St. 8"				
7p. Touring.....	1995	4	3645	ahmnpwx
4p. Roadster.....	1995	2	3435	Ahmnpwx
4p. Coupe.....	1995	2	3610	ahmnpwx
4p. Ctry. Club.....	1995	2	3610	ahmnpwx
5p. Sedan.....	1995	4	3760	ahmnpwx
7p. Sedan.....	2095	4	3870	ahmnpwx

CHEVROLET				
"AA"				
2p. Roadster.....	\$ 525	2	1890	dr
5p. Touring.....	525	4	1965	dr
2p. Util Cpe.....	625	2	2090	dhr
5p. Coach.....	595	2	2190	dhr
5p. Sedan.....	695	4	2275	dhr
24p. Cabriolet.....	715	2	2135	dhr
5p. Land. Sedan.....	745	4	2270	dhr
Imp. Land.....	780	4	2260	dhr

CHRYSLER "52"				
5p. Touring.....	\$ 750	4	4	ar
24p. Roadster.....	725	2	2210	ar
2p. Coupe.....	725	2	2355	ar
5p. Sedan.....	735	2	2350	ar
5p. Sedan.....	795	4	2455	ar
5p. De L. Sedan.....	875	4	2390	ahr
5p. Touring.....	1095	4	2645	aghnr
24p. Roadster.....	1175	2	2625	aeghnrx
5p. Sedan.....	1145	2	2770	aghnr
5p. Sedan.....	1245	4	2840	aghnr
24p. Coupe.....	1245	2	2750	aghnr
5p. Land. Sedan.....	1295	4	2855	aghnr
24p. Roadster.....	1495	2	2990	aeghmnrwx
24p. Sp. Rdstr.....	1525	2	2990	aeghmnrwx
4p. Coupe.....	1595	2	3185	aghmnrx
24p. Coupe.....	1545	2	3185	aghmnrx
5p. Roy. Sedan.....	1595	4	3290	aghmnortx
24p. Con't Coupe.....	1745	2	3100	aghmnrx
5p. Crown Sedan.....	1745	4	3290	aghmnortx
5p. Phaeton.....	2495	4	3925	aeghlmpnrwx
24p. Roadster.....	2595	2	3805	Beghlmpnrwx
7p. Phaeton.....	2645	4	4115	Beghlmpnrwx
24p. Sp. Roadster.....	2695	2	3805	Beghlmpnrwx
5p. Sp. Phaeton.....	2895	4	4240	Beghlmpnrwx
5p. Std. Sedan.....	2675	4	4155	aghlmnpnrwx
5p. Std. Landau.....	2795	4	4215	aghlmnpnrwx
7p. Std. Sedan.....	2895	4	4370	aghlmnpnrwx
5p. Sedan.....	3195	2	4260	aeghlmpnrwx
5p. Land. Sedan.....	3295	4	4220	aeghlmpnrwx
7p. Sedan.....	3295	4	4370	aeghlmpnrwx
5p. Coupe.....	3095	2	4220	aeghlmpnrwx
24p. Cabriolet.....	3495	2	4065	aeghlmpnrwx
5p. Sedan Lim.....	3595	4	4260	aeghlmpnrwx
7p. Sedan Lim.....	3595	4	4450	aeghlmpnrwx
5p. Town Car.....	5495	4	4265	aeghlmpnrwx

CUNNINGHAM				
"V-7"				
7p. Touring.....	\$6650	4	4600	Ceghklmnp
4p. Sp. Touring.....	6150	4	4500	Ceghklmnp
4p. Coupe.....	7600	2	4700	Ceghklmnp
6p. Limousine.....	8100	4	5000	Ceghklmnp
DAVIS "92-27"				
5p. Leg. Tour.....	\$1395	4	2915	Dhmnr
5p. Sedan.....	1595	4	3000	Dhmnr
5p. Imp. Sedan.....	1795	4	3055	Dghmnort
"94-27"				
5p. Roadster.....	1245	2	2350	dhr
5p. Touring.....	1285	4	2500	dhr
5p. Sedan.....	1285	4	2570	dhr
3p. Coupe.....	1285	2	2375	dhr
5p. Imp. Sedan.....	1385	4	2575	Dghmnort
"98-27"				
5p. Polo Rdstr.....	1795	2	3000	aghmnr
5p. Touring.....	1795	4	3050	aghmnrs
4p. Coupe.....	1865	2	3150	aghmnr
5p. Emp. Sedan.....	1885	4	3200	aghmnort

DIANA "St. 8"				
5p. Phaeton.....	\$1595	4	3100	agmn
5p. Roy. Roadster.....	1695	2	2995	agmnw
5p. P.B. Rdstr.....	1795	2	2995	Bgmnw
5p. Cab. Rdstr.....	1995	2	3160	aghmn
5p. Cab. Rdstr.....	2295	2	3160	aghmn
5p. 4d. Sedan.....	1995	4	3275	aghmnort
5p. 2d. Sedan.....	1695	2	3170	aghmnno
135" W.B.				
7p. Touring.....	1695	4	3336	agmn

DODGE BROS.				
108" W.B.				
5p. Sedan.....	875	4	2600	
5p. DeL. Sedan.....	975	4	2609	
2p. Coupe.....	855	2	2428	
4p. Cab. Rdstr.....	955	2	2428	
"Senior 6"				
4p. Cab. Rdstr.....	1595	4	3353	Cehmnrtx
5p. Sedan.....	1595	4	3412	Cehmnrtx
4p. Coupe.....	1570	2	3315	Cehmnrtx
du PONT "E"				
4p. Roadster.....	\$2800	2	3700	afghkma
5p. Touring.....	2800	4	3850	afghkma
4p. Coupe.....	3200	2	3850	afghkmt
5p. Sedan.....	3400	4	4100	afghkmt
5p. Con. Sedan.....	3750	4	4100	Bfghkmt
ELCAR "6-70"				
5-7p. Touring.....	\$1275	2	2580	ahjmar
4p. Land. Rdstr.....	1475	2	2670	ahjmar
4p. Brougham.....	1295	2	2750	ahjmar
5p. Sedan.....	1395	4	2750	ahjmar
"8-82"				
5-7p. Touring.....	1645	2	3320	aeghmnr
24p. Roadster.....	1870	2	3320	aeghmnr
5p. Brougham.....	1595	2	3410	aeghmnr
5p. Sedan.....	1790	4	3490	aeghmnr
"8-90"				
7p. Touring.....	2465	4	3675	aeghkmnrw
4p. Land. Rdstr.....	2295	2	3620	aeghmnr
5p. Brougham.....	2195	2	3710	aeghmnr
5p. Sedan.....	2265	4	3895	aeghkmnr
7p. Sedan.....	2765	4	4245	aeghkmnr

ERSKINE "6"				
5p. Tourer.....	\$915	4	2300	ahmar
2p. Spt. Rdstr.....	965	2	2265	B
2p. Bus. Coupe.....	985	2	2330	ahmar
24p. Spt. Coupe.....	965	2	2330	ahmar
5p. Cus. Sedan.....	965	4	2425	ahmar
ESSEX				
"Super Six"				
2p. Speedabout.....	\$700	2	2115	amnr
4p. Speedster.....	835	4	2230	amnr
2p. Coupe, cloth.....	735	2	2330	thmnr
2p. Coupe, leather.....	750	2	2330	thmnr
5p. Coach.....	735	2	2450	ahmnr
5p. Sedan.....	835	4	2490	ahmnr

FALCON-KNIGHT				
4p. Roadster.....	\$1025	2	2450	ghr
5p. Touring.....	1250	4	2500	Beghkmnrwx
4p. G.C. Rdstr.....	995	2	2565	ghr
2p. Coupe.....	995	2	2665	ghr
5p. Brougham.....	1095	4	2700	ghor
5p. Sedan.....	1145	4	2735	ghrtu

FLINT "60"				
5p. Touring.....	\$1250	4	2750	aehmnrx
4p. Spt. Rdstr.....	1350	2	2885	Aehmnrw
4p. Cpe. Rdstr.....	1395	2	2890	aehtnorr
5p. Sedan.....	1395	4	3030	aehtnorr
5p. Brougham.....	1395	2	3010	aehtjmnor
"80"				
120" W.B.				
5p. Touring.....	1450	4	3245	aehmnr
4p. Spt. Tour.....	1595	4	3395	aehmnrwx
4p. Coupe.....	1795	2	3500	aehmnr
5p. Sedan.....	1850	4	3625	aehmnortx
130" W.B.				
7p. Touring.....	1595	4	3470	afhmnrx
7p. Sedan.....	2050	4	3780	aehmnortx
"Z-18"				
5p. Del. Coach.....	895	4	2580	aehknor

Prices, Weights and Equipment of Current Passenger Car Models

Passenger and Model	F.O.B. Price	Doors	Shipping Weight	Standard Equipment
FORD "T"				
2p. Runabout.....	\$360	2	1658	a
5p. Touring.....	380	4	1732	a
2p. Coupe.....	485	2	1820	a
5p. Tudor Sedan.....	495	2	1950	a
5p. Fordor Sedan.....	545	4	2002	B
FRANKLIN "11-B"				
3p. Spt. Rdster.....	\$2690	2	3015	aeghklrx
5p. Touring.....	2635	4	2975	aeghklpr
3p. Coupe.....	2490	2	3105	aeghklpr
3-5p. Coupe.....	2565	2	3150	aeghklpr
4p. Victoria.....	2740	2	3165	aeghklpr
5p. Sedan.....	2790	4	3230	aeghklpr
5p. Ox. Sedan.....	2815	4	3230	aeghklpr
5-7p. Sedan.....	2840	4	3240	aeghklpr
5p. Spt. Sedan.....	2910	4	3305	aeghklrx
7p. Limousine.....	2940	4	3360	aeghklpr
GARDNER "80"				
4p. Roadster.....	\$1395	2	3030	amn
4p. Rdstr. DeL.....	1495	2	3030	aeghmr
5p. Bro'm Coupe.....	1695	2	3375	amn
4p. Vic. Coupe.....	1695	2	3375	amn
5p. Sedan.....	1695	4	3370	amn
5p. Sedan DeL.....	1795	4	3370	aeghmr
5p. Bro. Cpe. DeL.....	1795	2	3375	aeghmr
4p. Vic. Cpe. DeL.....	1795	2	3375	aeghmr
HUDSON "Super Six" "Std. Line" "Custom"				
5p. Coach.....	\$1285	2	3505	agbjmr
5p. Sedan.....	1385	4	3620	agbjmr
7p. Phaeton.....	1600	4	3565	agmr
4p. Brougham.....	1575	4	3660	agbjmr
7p. Sedan.....	1850	4	3760	agbjmr
HUPMOBILE "A-5" "E-3"				
5p. Coach.....	1175	2	3510	agbjmr
5. Sedan.....	1285	4	3590	agbjmr
HUPMOBILE "A-5" "E-3"				
5p. Touring.....	\$1325	4	2620	eghnr
2-4p. Roadster.....	1385	2	2660	aghr
2-4p. Coupe.....	1385	2	2800	eghnr
5p. Sedan.....	1385	4	2800	eghnr
5p. Brougham.....	1385	2	2890	eghjn
"E-3"				
5p. Touring.....	1945	4	3300	eghnr
7p. Touring.....	2045	4	3360	eghnr
2-4p. Roadster.....	2045	2	3355	eghnr
5p. Brougham.....	2245	2	3515	j
2-4p. Coupe.....	2345	2	3465	dghrx
5p. Sedan.....	2345	4	3545	aghrx
5p. Victoria.....	2345	2	3525	aeghnr
7p. Sedan.....	2495	4	3360	ehr
7p. Sedan Lim.....	2595	4	3380	aehnr
JORDAN "R"				
4p. Blue Boy.....	\$1745	4	2800	Beeghkmrx
4p. Spt. Salon.....	1595	2	2775	agbjmr
2-4p. Tomboy.....	1595	2	2650	agbjmr
5p. Sedan.....	1595	4	2775	agbjmr
"J-1"				
4p. Playboy.....	1545	2	2915	agbjmr
2-4p. Sp. Coupe.....	1695	2	3070	agbjmr
5p. Cus. Sedan.....	1695	4	3200	agbjmr
4p. Cus. Viet.....	1695	2	3200	agbjmr
"AA"				
2-4p. Playboy.....	2345	2	3200	agbjmr
2-4p. Sp. Coupe.....	2495	2	3340	agbjmr
4p. Cus. Viet.....	2495	2	3470	agbjmr
5p. Cus. Sedan.....	2495	4	3470	agbjmr
KISSEL "6-55" 124" W.B.				
5p. Phaeton.....	\$1685	4	3020	ahmnr
4p. Speedster.....	1895	2	3160	ah
4p. Coupe Rd.....	1895	2	3483	ahmnr
5p. Brougham.....	1665	2	3300	ahmnr
5p. Spec. Bro'm.....	1795	2	3486	ah
5p. Bro'm Sedan.....	1895	4	3440	ah
5p. Conv. Bro'm.....	2295	4	3378	
131" W.B.				
7p. Touring.....	1785	4	3660	ah
4p. Tourster.....	1895	4	3225	ahmnr
5p. Br'm Sedan.....	2095	4	3596	ah
7p. Sedan.....	2295	4	3770	ahmnr
"8-65" 125" W.B.				
5p. Phaeton.....	1885	4	3240	ahmnr
4p. Speedster.....	2095	2	3155	ahmnr
4p. Cp. Rdstr.....	2095	2	3343	ahmnr
5p. Brougham.....	1895	2	3330	ahmnr
5p. Spec. Bro'm.....	1995	2	3345	ahmnr
5p. Bro'm Sedan.....	2095	4	3400	ahmnr
5p. Conv. Bro'm.....	2495	4	3518	ahmnr
132" W.B.				
7p. Touring.....	1985	4	3360	ahmnr
4p. Tourster.....	2095	4	3155	ahmnr
5p. Bro'm Sedan.....	2295	4	3455	ahmnr
7p. Sedan.....	2495	4	3630	ahmnr
"8-75" 131" W.B.				
5p. Phaeton.....	2185	4	3220	ahmnr
4p. Speedster.....	2395	2	3360	ahmnr
4p. Cpe. Rdstr.....	2395	2	3578	ahmnr
5p. Brougham.....	2195	2	3565	ahmnr
5p. Spec. Bro'm.....	2295	2	3671	ahmnr
5p. Bro'm Sedan.....	2395	4	3760	ahmnr
5p. Conv. Bro'm.....	2795	4	3863	ahmnr
139" W.B.				
7p. Touring.....	2285	4	3630	ahmnr
4p. Tourster.....	2395	4	3335	ahmnr
5p. Bro'm Sedan.....	2595	4	3755	ahmnr
7p. Sedan.....	2795	4	3975	ahmnr
5p. Sedan DeL.....	2985	4	3910	aeghbmrvx
7p. Sedan DeL.....	3495	4	4080	aeghbmrvx
7p. Ber. Sedan.....	3585	4	4125	aeghbmrvx
LA SALLE				
2-4p. Roadster.....	\$2525	2	3702	aeghlmprx
4p. Phaeton.....	2495	4	3716	aeghlmprx
2-4p. Coupe.....	2585	2	3834	aeghlmprx
2-4p. Conv. Cpe.....	2635	2	3834	aeghlmprx
4p. Victoria.....	2635	2	3795	aeghlmprx
5p. Town Sedan.....	2650	4	4000	aeghlmprx
5p. Sedan.....	2685	4	4065	aeghlmprx
LINCOLN "8"				
2p. Spt. Rdster.....	\$4600	2	4930	aeghlmprx
7p. Spt. Touring.....	4600	4	4920	aeghlmprx
4p. Phaeton.....	4600	4	4960	beghlmprx
4p. Coupe.....	4600	2	4910	aeghlmprx
4p. Sedan.....	4800	4	4920	aeghlmprx
5p. Sedan.....	4800	4	5030	aeghlmprx
7p. Sedan.....	5000	4	5050	aeghlmprx
7p. Limousine.....	5200	4	5180	aeghlmprx
LOCOMOBILE "8-70"				
5p. Brougham.....	\$1895	4	3330	afghkmprx
5p. Sedan.....	1895	4	3335	afghkmprx
4p. Collap. C'pe.....	1995	2	3335	afghkmprx
"8-80"				
... Spe Rdster.....	\$3500	2	4000	aeghlmprx
4p. Spt. Touring.....				
4p. Collap. Coupe.....	2850	2	4000	aeghlmprx
5p. Sedan.....				
5. Brougham.....	2900	4	4000	aeghlmprx
7p. Sedan.....				
7p. Sub. Sedan.....	3500	4	4000	aeghlmprx
"48"				
4p. Sportif.....	5030	4	5030	afghjklrx
... Roadster.....	5030	4	5030	afghjklrx
7p. Touring.....	5330	4	5330	afghjklrx
7p. Tour Lim.....	5460	4	5460	afghjklrx
6p. Brougham.....	5464	4	5464	afghjklrx
5p. Vic. Sedan.....	5600	4	5600	afghjklrx
7p. Lim. Enc. Dr.....	5688	4	5688	afghjklrx
7p. Cabriolet.....	5624	4	5624	afghjklrx
"90"				
4p. Sportif.....	5900	4	4475	aeghklmnr
4p. Roadster.....				
7p. Touring.....	6000	4	4475	aeghklmnr
5p. Vic. Sedan.....				
7p. Suburban.....	7300	4	4842	afghlmprx
... Vic. Sed.....	7500	4	4930	afghlmprx
7p. Town Bro'm.....				
7p. Cabriolet.....	7500	4	4615	afghlmprx
... Collap. Cab.....	7750	4	4615	aeghklmnr
MCFARLAN "Str. 8" 131" W.B.				
4p. Roadster.....	\$3050	2	3400	Ceghlmprx
5p. Touring.....	3180	4	3400	afghmrx
4p. Sp. Phaeton.....	3180	4	3400	afghmrx
4p. Coupe.....	3180	2	3650	afghlmprx
5p. Sedan.....	3180	4	3650	afghlmprx
5p. Coach Bro'm.....	3180	4	3650	afghlmprx
5p. Town Car.....	4600	4	3750	afghlmprx
136" W.B.				
7p. Sedan.....	3280	4	3700	afghlmprx
7p. Sub. Sedan.....	3480	4	3700	afghlmprx
"TV"				
2p. Roadster.....	5800	2	4000	Aeghlmprx
4p. Spt. Tour.....	5600	4	4600	Ceghlmprx
4. Tour. Sedan.....	6720	4	5200	Cfghlmprx
7p. Touring.....				
6p. Sedan.....	5700	4	5200	Afghlmprx
7p. Sub. Sedan.....				
7p. Town Car.....	6920	4	4000	Ceghlmprx
7p. Town Car.....				
7p. Town Car.....	9000	4	5200	Cfghlmprx
MARMON "Little"				
2p. Speedster.....	\$1895	2	3019	aeghlmprx
4p. Speedster.....	1965	4	2977	aeghlmprx
4p. Sedan.....	1795	2	3039	aeghlmprx
2p. Coupe.....	1895	2	3053	aeghlmprx
4p. Brougham.....	1895	3090		
4p. Sedan.....	1895	4	3062	aeghlmprx
2p. Coupe Rdstr.....	1995	2	3054	aeghlmprx
4p. Victoria.....	2595	2	3116	aeghlmprx
5p. Cus. Sedan.....	2595	4	3119	aeghlmprx
5p. Cus. Sedan.....	2595	4	3172	aeghlmprx
4p. Town Cab.....	3125	4	3040	aeghlmprx
"E-75"				
2p. Speedster.....	3485	2	4251	aeghlmprx
4p. Speedster.....	3485	2	4256	aeghlmprx
5p. Phaeton.....	3485	4	4017	aeghlmprx
7p. Tour. Speed.....	3565	4	4480	aeghlmprx
2p. Coupe Rdstr.....	3565	2	4374	aeghlmprx
5p. Town Coupe.....	3195	2	4452	aeghlmprx
2p. Coupe.....	3485	2	4373	aeghlmprx
4p. Victoria.....	3485	2	4346	aeghlmprx
5p. Brougham.....	3565	4	4525	aeghlmprx
5p. Sedan.....	3565	4	4498	aeghlmprx
7p. Sedan.....	3640	4	4620	aeghlmprx
5p. Cus. Sedan.....	3960	4	4515	aeghlmprx
7p. Cus. Sedan.....	4075	4	4678	aeghlmprx
7p. Cus. Limou.....	4175	4	4718	aeghlmprx
MOON "6-60"				
3p. Roadster.....	\$995	2	2295	an
5p. Phaeton.....	995	4	2340	an
3-5p. DeL. Rdstr.....	1095	2	2330	dn
3-5p. Roy. Rdstr.....	1195	2	2330	anw
3-5p. Roy. Cab.....	1295	2	2575	an
3-5p. Cab. Rdstr.....	1195	2	2575	dn
5p. Coach.....	1045	2	2420	an
5p. 2d. Sedan.....	1145	2	2520	dn
5p. Roy. Sedan.....	1195	2	2520	ahin
5p. 4d. Sedan.....	1245	4	2605	dn
5p. Roy. Sedan.....	1295	4	2605	ahn
5p. Cust. Sedan.....	1395	4	2605	ah
"A"				
5p. Touring.....	1195	4	2560	dn
5p. Roy. Rdstr.....	1565	2	2720	dn
... Collap. Cab.....	1795	2	2720	dn
5p. Sedan DeL.....	1395	2	2710	dno
5p. Sedan DeL.....	1545	4	2860	dno
... Spec Sedan.....	1545	4	2860	dno
NASH "Std. 6"				
5p. Touring.....	\$865	4	2325	Dghnr
2p. Coupe.....	875	2	2345	Dghnr
5p. Sedan.....	895	2	2450	Dghnr
5p. Sedan.....	995	4	2500	Dghnr
5p. Land. Sedan.....	1085	4	2610	Dghnr
"Special"				
4p. Roadster.....	1225	2	2980	Dhnr
5p. Touring.....	1135	4	2980	Dhnr
4p. Cabriolet.....	1290	4	3070	Dghnr
2p. Bus. Coupe.....	1165	2	3030	Dhnr
5p. Sedan.....	1215	2	3150	Dhnr
5p. Sedan, 4d.....	1335	4	3250	Dghnr
"Advanced"				
4p. Roadster.....	1475	2	3400	Dghmnr
5p. Touring.....	1340	4	3400	Dghmnr
5p. Sedan.....	1425	2	3620	Dghmrv
5p. Sedan.....	1545	4	3650	Dghmrv
127" W.B.				
7p. Touring.....	1440	4	3500	Dghmnr
5p. Sp. Touring.....	1540	4	3500	Bghmnr
5p. Victoria.....	1595	2	3640	Dghmrv
4p. Coupe.....	1775	2	3650	Dghmrv
5p. Amb. Sedan.....	1925	4	3820	Dghmrv
7p. Sedan.....	1990	4	3830	Dghmrv
OAKLAND "6"				
5p. Sp. Phaeton.....	1075	4	2620	aejh
5p. Sp. Rdster.....	1075	2	2590	aejh
... Cabriolet.....	1145	2	2590	aejh
5p. 2d. Sedan.....	1045	2	2745	ahu
3p. Land. Coupe.....	1045	2	2705	ah
5p. 4d. Sedan.....	1145	4	2855	ahu
5p. Land. Sedan.....	1265	4	2885	aejh
OLDSMOBILE "30-E"				
5p. Sp. Touring.....	\$895	4	2490	ceghlmr
4p. DeL. Rdstr.....	895	2	2317	ceghlmr
2p. Coupe.....	875	2	2317	ceghlmr
5p. Sedan 2d.....	875	2	2317	e
5p. Sedan 4d.....	975	4	2317	e
4p. Sp. Coupe.....	965	2	2650	ceghlmr
5p. Landau.....	1075	4	2780	ceghlmr

KEY TO SYMBOLS

- KEY TO SYMBOLS
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|-------------------------------|--------------------------------|--------------------------|---------------------------|-------------------------|
| A—Wood wheels with spare. | D—Disk wheels with spare. | i—Trunk and trunk rack | o—Car heater. | v—Vanity set. |
| a—Wood wheels. | d—Disk wheels. | j—Trunk rack, no trunk. | p—Cigar lighter. | w—Windshield wings |
| B—Wire wheels with spare. | e—Front and rear bumpers. | k—Spare tire. | r—Rear traffic signal. | x—Clock. |
| b—Wire wheels. | f—Front bumper. | l—Spare tire lock. | s—Spotlight. | *—Overall length. |
| C—Optional wheels with spare. | g—Shock absorbers or snubbers. | m—Engine head indicator. | t—Vanity and smoking set. | §—Prices on application |
| c—Type of wheels optional. | h—Automatic windshield wiper. | n—Dash gasoline gauge. | u—Smoking set. | |

Prices, Weights and Equipment of Current Passenger Car Models

Passengers and Model	F.O.B. Price	Doors	Shipping Weight	Standard Equipment
OVERLAND				
4p. Whippet	\$625	4	1985	ag
5p. Touring	695	2	1930	ag
24p. Roadster	625	2	2025	ag
2p. Coupe	625	2	2075	ag
5p. Coach	725	4	2185	ag
5p. Sedan	755	4	2230	ag
5p. Landau	825	2	2225	ag
24p. Roadster	765	2	2270	ag
5p. Touring	795	2	2305	ag
2p. Coupe	795	2	2405	ag
5p. Coach	875	4	2440	ag
5p. Sedan	925	4	2490	aght
5p. Landau				
PACKARD				
4p. Runabout	\$2275	2	3545	Deghlmpx
5p. Phaeton	2275	4	3590	Deghlmpx
5p. Sedan	2285	4	3925	Deghlmpx
5p. Phaeton	2385			
4p. Runabout	2385			
7p. Touring	2485	4	3790	Deghlmpx
4p. Coupe	2685	2	3925	deghint
5p. Club Sedan	2685	4	4015	Deghlmpx
7p. Sedan	2685	4	4070	Deghlmpx
7p. Sedan Lim.	2785	4	4130	Deghlmpx
4p. Runabout	3975			
5p. Phaeton	3975			
7p. Touring	4050	4	4250	Deghlmpx
4p. Coupe	4950			
5p. Club Sedan	4950	4	4550	Deghlmpx
7p. Sedan	5150	4	4660	Deghlmpx
7p. Sedan Lim.	5250	4	4700	Deghlmpx
PAIGE "6-45"				
5p. Touring	\$1095	4		aeghnr
2p. Coupe	1095	2	2525	aeghnr
4p. Cab. Rdster	1195	2	2615	aeghnr
5p. Brougham	1095	2	2660	aeghnr
5p. Sedan	1195	4	2760	aeghnr
5p. Sedan	1395	2	3055	aeghmrwz
5p. Brougham	1395	2	3215	aeghmrwz
5p. Land. Bro'm.	1395	2	3115	aeghmrwz
5p. Sedan	1495	4	3280	aeghmrwz
5p. Sedan	1655	4	3420	aeghmrwz
4p. Cab. Rdster	1895	2	3540	aeghmrwz
5p. Sedan	1695	4	3550	aeghmrwz
4p. Coupe	1895	2	3550	aeghmrwz
7p. Sedan	1995	4	3765	aeghmrwz
7p. Limousine	2145	4	3805	aeghmrwz
7p. Touring	2195	4	3570	aeghmrwz
5p. Sedan	2255	4	3700	aeghmrwz
4p. Coupe	2495	2	3700	aeghmrwz
4p. Cabriolet	2495	2	3690	aeghmrwz
7p. Limousine	2525	4	3910	aeghmrwz
7p. Limousine	2665	4	3950	aeghmrwz
PEERLESS				
24p. Roadster	\$1295	2	2600	aeghlmpx
24p. C'pe Rdster	1345	4	2725	aeghlmpx
5p. Sedan	1345	4	2895	aeghlmpx
5p. Sedan	2295	2	3400	aeghlmpx
5p. Sedan	2395	4	3475	aeghlmpx
5p. Sedan	1995	4	3175	aeghlmpx
24p. Roadster	2195	2	3300	aeghlmpx
7p. Sedan	2595	4	3675	aeghlmpx
PIERCE ARROW				
2p. Runabout	\$2495	2	3285	aeghlmpx
7p. Phaeton	2895	4	3440	aeghlmpx
4p. Phaeton	3095	4	3300	aeghlmpx
4p. Conv't Coupe	3350	2		
5p. Brougham	2495	2	3470	aeghlmpx
5p. Sport Land.	3025	4		
2p. Coupe	3100	2	3405	aeghlmpx
5p. Std. Sedan	2895	4	3525	aeghlmpx
7p. Std. Sedan	3350	4	3620	aeghlmpx
24p. Coupe	3200	2	3450	aeghlmpx
5p. Club Sedan	3300	4	3565	aeghlmpx
5p. Club Land.	3400	4	3570	aeghlmpx
7p. Enc. Dr. Lim.	3450	4	3680	aeghlmpx
4p. Coupe	3250	2	3420	aeghlmpx
5p. Del. Sedan	3895	4	3500	aeghlmpx
7p. Del. Sedan	3995	4	3600	aeghlmpx
7p. Lim. Encl.	4045	4	3660	aeghlmpx
2p. Runabout	5875	2	4560	aeghlmpx
4p. Touring	5875	4	4510	aeghlmpx
7p. Touring	5875	4	4585	aeghlmpx
7p. Sedan	5875	4	4815	aeghlmpx
7p. Lim. Encl.	5875	4	4870	aeghlmpx
3p. Coupe	6375	2	4760	aeghlmpx
4p. Cpe. Sedan	6375	2	4795	aeghlmpx
4p. Sedan	6375	4	4830	aeghlmpx
7p. Enc. Dr. Lan.	6000	4	4895	aeghlmpx
7p. Sedan Land.	6000	4	4840	aeghlmpx
4p. Lim. Encl.	6375	4	4880	aeghlmpx
4p. Sedan	6475	4	4805	aeghlmpx
2p. Coupe	6600	2	4745	aeghlmpx
4p. Sedan Land.	6600	4	4800	aeghlmpx
4p. Encl. Land.	6600	4	4880	aeghlmpx
7p. Fr. Limou.	7500	4	4740	aeghlmpx
7p. Fr. Landau.	8000	4	4865	aeghlmpx
PONTIAC "6"				
24p. Roadster	\$745	2	2160	ah
2p. Coupe	745	2	2275	ah
5p. 2d. Sedan	745	2	2375	ah
4p. Sport Cab.	795	2	2345	ah
5p. Land. Sedan	845	4	2460	ah
5p. Del. Landau.	925	4	2510	ah
REO "A"				
2p. Roadster	\$1685	2	3300	aeghnr
5p. Brougham	1685	2	3425	aeghnr
2p. Sy. Coupe	1625	2	3320	aeghnr
4p. Victoria	1845	2	3350	aeghnr
5p. Sedan	1845	4	3550	aeghnr
5p. Del. Sedan	1995	4	3550	aeghnr
5p. Brougham	1195	2	2960	aeghnr
ROAMER				
2p. Roadster	\$1495	2		
4p. Coupe	1495	2		
5p. Sedan	1795			
5p. Sedan	\$1985	2	3410	ag
5p. Brougham	1985	2	3440	ag
5p. Sedan	1985	4	3570	ag
5p. Tourer	2495	4	3650	cg
5p. Sedan	2985	4	3880	cg
7p. Sedan	3285	4	3980	cg
ROLLS ROYCE				
"St. Ghost"				
Open Models	\$			Bfghjkmprtx
Closed Models	\$			Bfghjkmprtx
"New Phantom"				
Open Models	\$			Beghjkmptrtx
Closed Models	\$			Beghjkmptrtx
STAR "4"				
2p. Con. Rdster	\$550	2	1850	a
5p. Touring	550	4	1920	a
2p. Coupe	650	2	1965	ah
5p. Coach	675	2	2120	ah
5p. Sedan	765	4	2200	ah
5p. Touring	725	4	2070	a
24p. Roadster	885	2	2140	aeghkmrw
24p. Cabriolet	915	2	2260	aeghmr
2p. Coupe	795	2	2145	ahmr
5p. Coach	845	2	2265	ahmr
5p. Sedan	925	4	2340	ahmr
5p. Land. Sedan	975	4	2335	ahmrt
24p. Sp. Coupe	975	2	2295	aeghkmr
STEARNS-KNIGHT				
"F-6-85"				
4p. Roadster	\$3250	2	4252	aeghklmnp
4p. Touring	3250	4	4322	aeghklmnp
4p. Cab. Rdster	3550	2		aeghklmnor
5p. Cus. Sedan	3350	4	4562	aeghklmno
4p. Coupe	3450	2	4527	aeghklmno
5p. Std. Sedan	3450	4	4572	aeghklmno
5p. Sedan Lim.	3700	4	4650	aeghklmno
5p. Cus. Sed. Lim.	3700	4	4637	aeghklmno
7p. Sedan	3750	4	4702	aeghklmno
7p. Sedan Lim.	3950	4	4800	aeghklmno
"G8-85"				
4p. Roadster	3950	2	4448	aeghklmnp
4p. Touring	3950	4	4633	aeghklmnp
4p. Cabriolet	4550	2	4717	aeghklmnop
4p. Coupe	4550	2	4882	aeghklmnoc
5p. Sedan	4650	4	4934	aeghklmno
7p. Sedan	4750	4	5027	aeghklmno
5p. Sedan Lim.	4850	4	5009	aeghklmno
7p. Limousine	4950	4	5102	aeghklmno
STUDEBAKER				
"The Dictator"				
5p. Tourer	\$1165	4	3080	defghmnr
5p. Du Phaeton	1195	4		defghmnr
7p. Tourer	1245	4	3090	defghmnr
4p. Roadster	1245			deghmnr
STUTZ "AA"				
131" W.B.				
24p. Sp'dster	\$3350	2	4058	aeghlmpxrw
4p. Speedster	3360	4	4175	aeghlmpxrw
24p. Coupe	3365	2	4182	aeghlmpxrw
4p. Vict. Coupe	3375	2	4176	aeghlmpxrw
5p. Brougham	3395	4	4334	aeghlmpxrw
5p. Sedan	3395	4	4340	aeghlmpxrw
5p. Land. Sedan	3545	4		aeghlmpxrw
145" W.B.				
7p. Sedan	3855	4	4656	aeghlmpxrw
7p. Sedan Lim.	3985	4	4731	aeghlmpxrw
"AA Deluxe"				
131" W.B.				
2p. Speedster	3450	2	4058	aeghlmpxrw
4p. Speedster	3460	4	4175	aeghlmpxrw
"AA Custom"				
131" W.B.				
4p. Speedster	4935	4		aeghlmpxrw
5p. Pr. Wales Sed.	6345	4		aeghlmpxrw
5p. Wey. Deau. S.	4665	2		aeghlmpxrw
5p. Wey. Sedan	4665	4		aeghlmpxrw
145" W.B.				
7p. Speedster	3885	4		aeghlmpxrw
7p. Pr. Wales Sed.	6345	4		aeghlmpxrw
5p. Wey. Sedan	5185	4		aeghlmpxrw
7p. Cab. T'n Car	6995	4		aeghlmpxrw
24p. Cab. Coupe	3895	2		aeghlmpxrw
VELIE				
"Std. 50"				
24p. Roadster	\$1165			
3p. Coupe	1165	2	2730	aehkmr
5p. Sedan	1165	4	2810	aehkmr
5p. Met. Sedan	1325			eghk
"Spec. 60"				
5p. Club Ph'tn.	1450	4	3025	aehimprx
4p. Coupe	1585	2	3260	aehimprx
5p. Spec. Sedan	1585	4	3335	aehimprx
5p. Royal Sedan	1635	4	3350	aehimprx
WILLIS-KNIGHT				
"66-A"				
2p. Roadster	\$1850	2	3645	aghnrx
5p. Touring	1850	4	3684	aghnrx
24p. Cab C'pe	1955			aghnrx
4p. Foursome	2095	4	3973	aghnrx
5p. Sedan	1995	4	3975	aghnrx
135" W.B.				
7p. Touring	2495			
7p. Sedan	2850	4	4075	aghnrx
7p. Limousine	2950			4075
"70-A"				
24p. Roadster	1350	2	2965	aghnrx
5p. Touring	1295	4	2900	aghnrx
2p. Coupe	1295	2	2815	aghnrx
5p. Coach	1295	2	3010	aghnrx
24p. Cab Coupe	1495	2	2880	aghnrx
5p. Sedan	1495	4	3105	aghnrx

KEY TO SYMBOLS:

A—Wood wheels with spare.
a—Wood wheels.
B—Wire wheels with spare.
b—Wire wheels.
C—Optional wheels with spare.
c—Type of wheels optional.

D—Disk wheels with spare.
d—Disk wheels.
e—Front and rear bumpers.
f—Front bumper.
g—Shock absorbers or snubbers.
h—Automatic windshield wiper.

KEY TO SYMBOLS:
i—Trunk and trunk rack
j—Trunk rack, no trunk.
k—Spare tire.
l—Spare tire lock.
m—Engine heat indicator.
n—Dash gasoline gage.

- Car heater.
- p—Cigar lighter.
- r—Rear traffic signal.
- s—Spotlight.
- t—Vanity and smoking set.
- u—Smoking set.

v—Vanity set.
w—Windshield wings.
x—Clock.
*—Overall length.
§—Prices on application.

Mechanical Specifications of Current Passenger Car Models

This list comprises current cars distributed on a national basis only. Data for previous models back to 1920 will be found in the Chilton Catalog and Directory

MAKE AND MODEL	Wheel Base (Inches)	Tire Size	Decimals-Balloons	Model	Bore and Stroke	Rated H.P. N.A.A.C.P.	Valve Arrange- ment	Camshaft Drive	Piston Material	Crankshaft Vib'n Damped?	Oiling System	Oil Cleaner?	Cooling System	Thermostat?	Radiator Shutter?	Carburetor	Air Cleaner?	ENGINE				ELECTRICAL SYSTEM		Clutch—Type and Make	Gear Set—Make	Universal—Type and Make	REAR AXLE		BRAKES		Steering Gear—Make	Rear Springs—Type and Length	Chassis Lubrication— Type and Make	ABBREVIATIONS— NAMES OF MFRS. OF STOCK PARTS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
																		Number of Cyls.	Plation Dis- placement	Valve Arrange- ment	Camshaft Drive	Piston Material	Crankshaft Vib'n Damped?				Oiling System	Oil Cleaner?	Cooling System	Thermostat?					Radiator Shutter?	Carburetor	Air Cleaner?	Ignition System	Generator and Starter Make	Location	Foot—Type and Location	Hand Type	4-Wheel Type	Foot—Type and Location	Hand Type	4-Wheel Type																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Auburn.....	120	30x5.25	Con... 281	6-21x4 1/2	19.8	185	L	Ch. Cl.	Ch. Cl.	4	Y	PK	N	N	N	Sub	N	N	N	PK	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

THE present and increasing pressure of competition in motor car selling is emphasizing the merchandising worth of Lockheed Hydraulic Four Wheel Brakes. ~ ~ ~ ~

As competition in the passenger field becomes keener—the importance of Lockheed Hydraulic Four Wheel Brakes becomes greater.

Their value in the selling of a motor car is as obvious as their effectiveness in holding down service costs and in affording the car owner the permanent satisfaction which results in repeat sales.

HYDRAULIC BRAKE COMPANY
DETROIT, MICHIGAN, U.S.A.

LOCKHEED
HYDRAULIC
Four Wheel
BRAKES

MAKE AND MODEL		Wheel Base (Inches)	Tire Size	Model	Bore and Stroke	Rated H.P.	Valve Arrangement	Camshaft Drive	Piston Material	Dampers	Oiling System	Cooling System	Thermoset	Reducers	Shutters	Carburetor	Air Cleaner	ELECTRICAL SYSTEM			REAR AXLE			BRAKES		Steering Gear—Type and Make	Rear Springs—Type and Length	Chassis Lubrication—Type and Make	ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS	
				Make and Model	Number of Cyls.														Ignition System	Generator and Starter Make	Clutch—Type and Make	Gear Set—Make	Universal—Type and Make	Type and Make	Gear Ratio	Foot—Type and Location	Hand—Type and Location	4 Wheel Type		
8-70	Lecamore	122	31x6.00	Cont.	8-3/4x4 1/2	26.4	247	Ch. Al.	Al.	Y	P.K.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	Det.	m-Spi.	1/2	4.77	I-F	I-F	Ros.	S-58	Pr-Ze.	A-Bos—American-Bosch
8-80	Lecamore	130	32x6.00	Lyc Spe.	8-3/4x4 1/2	33.8	299	Ch. Al.	Al.	Y	P.C.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	War.	m-Spi.	1/2	4.81	I-F	I-F	Ros.	S-58	Pr-Ze.	A-K—Atwater-Kou
8-80	Lecamore	142	32x6.00	Ow.	48-6-3/4x4 1/2	48.6	525	Ch. Al.	Al.	Y	P.C.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	War.	m-Spi.	1/2	4.81	I-F	I-F	Ros.	S-58	Pr-Ze.	A-L—Auto-Life
8-90	Lecamore	138	33x6.75	Ow.	48-6-3/4x4 1/2	36.0	372	Ch. Al.	Al.	Y	P.C.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	Ow.	m-Spi.	1/2	4.9	I-F	I-F	Ros.	S-60	Pr-Ze.	Ada—Adams
8-90	Lecamore	138	33x6.75	Ow.	48-6-3/4x4 1/2	36.0	372	Ch. Al.	Al.	Y	P.C.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	Ow.	m-Spi.	1/2	4.9	I-F	I-F	Ros.	S-60	Pr-Ze.	Alm—Almco
8-100	Lecamore	138	33x6.75	Ow.	48-6-3/4x4 1/2	36.0	372	Ch. Al.	Al.	Y	P.C.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	Ow.	m-Spi.	1/2	4.9	I-F	I-F	Ros.	S-60	Pr-Ze.	Alm—Almco
8-100	Lecamore	138	33x6.75	Ow.	48-6-3/4x4 1/2	36.0	372	Ch. Al.	Al.	Y	P.C.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	Ow.	m-Spi.	1/2	4.9	I-F	I-F	Ros.	S-60	Pr-Ze.	Alm—Almco
8-100	Lecamore	138	33x6.75	Ow.	48-6-3/4x4 1/2	36.0	372	Ch. Al.	Al.	Y	P.C.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	Ow.	m-Spi.	1/2	4.9	I-F	I-F	Ros.	S-60	Pr-Ze.	Alm—Almco
8-100	Lecamore	138	33x6.75	Ow.	48-6-3/4x4 1/2	36.0	372	Ch. Al.	Al.	Y	P.C.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	Ow.	m-Spi.	1/2	4.9	I-F	I-F	Ros.	S-60	Pr-Ze.	Alm—Almco
8-100	Lecamore	138	33x6.75	Ow.	48-6-3/4x4 1/2	36.0	372	Ch. Al.	Al.	Y	P.C.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	Ow.	m-Spi.	1/2	4.9	I-F	I-F	Ros.	S-60	Pr-Ze.	Alm—Almco
8-100	Lecamore	138	33x6.75	Ow.	48-6-3/4x4 1/2	36.0	372	Ch. Al.	Al.	Y	P.C.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	Ow.	m-Spi.	1/2	4.9	I-F	I-F	Ros.	S-60	Pr-Ze.	Alm—Almco
8-100	Lecamore	138	33x6.75	Ow.	48-6-3/4x4 1/2	36.0	372	Ch. Al.	Al.	Y	P.C.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	Ow.	m-Spi.	1/2	4.9	I-F	I-F	Ros.	S-60	Pr-Ze.	Alm—Almco
8-100	Lecamore	138	33x6.75	Ow.	48-6-3/4x4 1/2	36.0	372	Ch. Al.	Al.	Y	P.C.	Pu.	Y	N	Sch.	Delco.	Delco.	Y	Delco.	P.B.&B.	Ow.	m-Spi.	1/2	4.9	I-F	I-F	Ros.	S-60	Pr-Ze.	Alm—Almco
8-100																														

[illegible]

Bosch Presents

A Completely New and Remarkably Advanced
BOSCH SHOCK ABSORBER

for

**CHEVROLET · DODGE · ESSEX
 STAR · PONTIAC · WHIPPET**

Ready September Fifteenth

Possessing the following features: **LOW PRICE**—absolutely waterproof—no need of adjustment—unbelievably simple—no wearing bearings—longest-lived on break down test—no strap abrasion—strap replacement in five minutes—simplest known form of tension installation—**NOISELESS**—**PHANTOM-LIKE ACTION**—fitters attached and packed in same carton.

The BOSCH Type "Y"
will be merchandised

on a "Dealer-Owner Protection Plan" of such breadth as to guarantee trouble-free satisfaction on every installation. For the above listed cars there is no shock absorber to compare with the new Type Y. That you may assure yourself a front rank position in the sales parade which commences September 15th, your inquiry as to prices and the new "Dealer-Owner Protection Plan" should be in immediately. Decide now so that you may be stocked early enough to cash in on the big sales promotion campaign. Return the coupon, or write if you have specific questions.

AMERICAN BOSCH MAGNETO CORP.

MAIN OFFICE AND WORKS: SPRINGFIELD, MASSACHUSETTS

BRANCHES: NEW YORK CHICAGO DETROIT SAN FRANCISCO



Full particulars concerning the new BOSCH Type Y Shock Absorbers would be appreciated by

NAME _____

ADDRESS _____

CITY _____

Announcing The ILLUSTRIOUS



A Personal Message to Every Motor Car Dealer From Walter P. Chrysler

"In announcing the Illustrious New Chrysler '72' we are confident that our new product is as great an advance over today's fine cars as was the famous '70' over the best of more than three years ago. The new '72' again sets new standards, establishes new results for the entire industry to follow. It is Chrysler's covenant of faith with the public, which hasso generously demonstrated its faith in us".

W. P. Chrysler

WIRE, WRITE OR

ing NEW CHRYSLER



The Most Startlingly Revolutionary Car That the Trade Has Seen Since the First Chrysler

The Illustrious New Chrysler "72"—a totally new Chrysler car—which is announced to the motoring public today, marks another epoch in motor car history.

We sincerely believe that it is a product even more revolutionary in design, in manufacture and in the performance and riding results it gives, than the first Chrysler.

And we feel that because this is so it will more than repeat the sweeping acceptance of that first Chrysler—giving untold new profit opportunities that no dealer can afford to disregard.

Never before has a car under \$2000 been planned, much less actually produced, that gives such engineering developments as are now combined in this most remarkable car.

As rapidly as the public becomes acquainted by actual demonstration and experience with its phenomenal qualities there will arise a thorough dissatisfaction with existing riding standards—even in cars of far higher price—forcing other makers again to follow in the path of Chrysler pioneering.

The handwriting on the wall is even more unmistakable than it was three years ago—for we know, from the preference which has swept

Chrysler from 27th to 4th place in the industry during the past three years, just how the public appreciates sincere effort to keep pace with its advancing needs.

The new "72" places the Chrysler dealer in a most enviable position regarding his future.

Chrysler's growth with the new complete line—"52", "62", "72" and the superfine Imperial "80", priced from \$725 to \$3595—should be even greater in the next three years than it has been in the past three.

Why not become a partner in this greater success? The public's enthusiasm for Chrysler compels us to add 2,000 more dealers in all parts of the country.

Our new Franchise Agreement presents an opportunity for the dealer which, we candidly believe, is without equal in the industry. Maybe you have at times, cast longing eyes on this franchise, but have never felt that it was available.

Why not investigate, NOW! Probably you are the very man we need.

Get in touch with us at once. Rest assured every request for additional information will be treated with strictest confidence, regardless of whether or not you wish to carry the matter further.

CHRYSLER SALES CORPORATION, DETROIT, MICHIGAN
CHRYSLER CORPORATION OF CANADA, LIMITED, WINDSOR, ONT.

PHONE NOW

AUBURN

Breaks

All

5000 miles— at 63.695 m.p.h., less than 4,710 minutes

10000 miles— at 63.302 m.p.h., less than 9,479 minutes

then one car after running 10,000 miles made

[1000 miles— at 72.512 m.p.h., less than 828 minutes **]**

15000 miles— at 61.377 m.p.h., less than 14,664 minutes

The Longest, Fastest and Hardest
Official A. A. A. Performance
Of Any Stock Car Ever Built

Stock Car Records

For Fully Equipped Stock Cars

Smashes all former records from 5 to 5000 miles
Sets new records from 5000 to 15000 miles making
34 new records, in one continuous run ~ ~

Success begets success!

Auburn's sales increase is amazing. Why?

We have known all along the real value of Auburn cars. Often we have demonstrated this value, such as winning the Salem 100-mile stock car race, at 89.19 M. P. H.

A car **MUST** be properly engineered to perform and survive extreme tests like that. No wonder people, despite competitors' claims, voluntarily go to Auburn stores and buy. Words can't beat deeds!

Despite our repeated proofs of value, others have said "impossible" or, "Oh, it's just luck."

To silence all controversy and absolutely determine stock car

supremacy beyond any previous attainment, we did 5 things:

(1) Bought an 8-88 Sedan back from a private owner; (2) Took two 8-88 Roadsters from the end of our assembly lines; (3) Obtained A.A.A. sanction; (4) Broke all American records for fully equipped stock cars from 5 to 5000 miles and established many new ones for 5000 to 15000 miles; (5) Gave the world overwhelming proof that Auburn stock cars are better built, will perform better and endure longer.

There can be no question now in **BUYERS' MINDS** as to what car gives the greatest value. More than ever buyers will go to Auburn stores. Read these records, then write or wire us.

on
Atlantic City
Speedway
under
A.A.A.
Sanction

These stock car records, the greatest in the entire history of the industry, were not made behind paid locks nor timed by paid observers, but under American Automobile Association supervision on Amatol Speedway. The public was invited to this phenomenal demonstration. Competitive engineers were there and checked everything—and marveled). A. A. A. experts tore down the cars and certified they are strictly stock.



Write for This Book

AUBURN AUTOMOBILE COMPANY, AUBURN, INDIANA

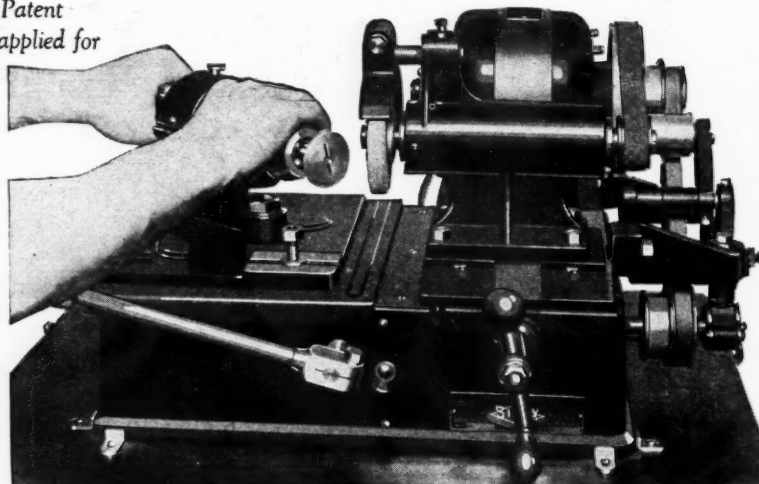
VALVE FACE GRINDING MACHINE

with the NEW
**Sioux Roller
Chuckling System**

No. 650

Patent
applied for

Net price complete **\$160**



Your Jobber
Sells It.

Cuts down labor costs on Valve Work

With a Sioux Valve Face Grinding Machine you can do all valve work so much easier, quicker and better than by any other method. With the prevailing flat rate system of charges, this means that you can make an extra margin of profit on every job. Besides, you can make *extra money* by refacing valves for other shops.


The Sioux Roller Chuckling System

on this machine is an exclusive Sioux achievement—a new improved type of amazing simplicity, speed and efficiency. Accuracy guaranteed within .001 inch. Its three rollers give the correct gripping for accurate work and its floating aligner holds the stem rigidly centered to assure the valve face being ground in true relation to the entire length of stem. The No. 650 refaces valves of any angle with stem capacity of 5/16 to 41/64", inclusive. Investigate the *Sioux* before you buy.

Albertson & Co., Sioux City, Iowa, U. S. A.

SIoux

Trade Mark Reg. U.S. Patent Office

- 
- [1] Popular Price
 - [2] Hydraulic
 - [3] **80/20** Factor
 - [4] No holes to drill

Try a Set 10 Days at Our Expense

Let us prove to you that Thompson Hydraulicators will make sales for you. Equip one of your cars with a trial set. Demonstrate it for ten days. If you aren't *anxious* to carry Hydraulicators after that, we will take back the trial set and you will not owe us a penny. Write today, direct to us, for complete details about Thompson Hydraulicators and the free trial offer.

OTHER DEALERS SAY:

"We have installed Thompson Hydraulicators on nearly all the cars we have sold since Fall, 1925. They have given universal satisfaction to owners and are, without a doubt, *the most effective shock absorber* that we have sold."

"It is remarkable that none of the several hundred sets installed by us have required any service or any replacement of parts."

"We have installed approximately twenty-five sets within the last sixty days." (This is a town of seven thousand population!)

(Names and addresses of dealers giving above information will be supplied on request. Original letters on file in The Thompson Spring Corporation's office.)

A
FIST-FULL
of
REASONS
for selling

THOMPSON
HYDRAULICATORS

Trade Mark and Patents Reg. U. S. Patent Office

made by

THE THOMPSON SPRING CORP.
WILMINGTON DELAWARE

Write today for the name
of the nearest
THOMPSON DISTRIBUTOR

for 82 Models of Cars and Trucks

BUICK—Standard
BUICK—Master
CHEVROLET—1925-27
CHRYSLER—Model "50"
CHRYSLER—
Model "58" & "60"
DODGE—4-cylinder
ESSEX
ERSKINE
FORD—
Sedan and Touring 1926-27
FORD—
Coupe and Roadster 1926-27
FORD—
Sedan and Touring 1924-25
FORD—
Coupe and Roadster 1924-25
FORD—Front Spring Controller
FALCON-KNIGHT
HUDSON—1925-26
HUDSON—1927
NASH—Light Six

NASH—Advanced Six
OAKLAND—1925-26
OAKLAND—1927
OLDSMOBILE—1925-27
(with 2-wheel brakes only)
PONTIAC
STUDEBAKER—Std. 1925-27
(with 2-wheel brakes only)
STAR—4 & 6 Cyl. 1925-26
STAR—4 & 6 Cyl. 1927
WHIPPET—4 Cyl.
WHIPPET—6 Cyl.
WILLYS-KNIGHT—Model 66-A
WILLYS-KNIGHT—Model 70
TRUCK UNITS:
CHEVROLET— $\frac{1}{2}$ Ton
CHEVROLET—1 Ton
DODGE— $\frac{1}{2}$ Ton
FORD—1 Ton (front only)
GRAHAM—1 Ton
PONTIAC— $\frac{1}{2}$ Ton

Now!

-a wall type Air Scale

for

Garages
Tire Shops
Auto Sales Rooms
Service Departments
Fleet Garages

Identical in construction and operation with other models of Air Scales, thousands of which are in daily use at service stations everywhere, except that it is designed for indoor installation where it is desired to conserve floor space.

For single or multiple installation, this wall model Air Scale provides a speedy, safe, convenient, accurate and automatic means of tire inflation without need for tire gauges.

The weighing unit, operating on the beam principle rather than being controlled by springs, is dependable and accurate. Calibrated from 20 to 130 pounds it services any tire, including high pressure truck tires. Special filter removes all moisture, grease and pipe scale from the air.

Sold with the broadest guarantee ever written on any equipment.

Ask Your Jobber

to show you this and other Air Scale models. Or, write direct to us for complete information. If you are now building or contemplate building be sure to see that Air Scale equipment is included. Our engineering department will gladly co-operate with your architect or contractor.



Model
"DW"

Wall Model Air Scale complete with water attachment for radiator filling. Model "D" same unit without water attachment.

The Air Scale Company

806 BROADWAY

TOLEDO, OHIO

Special Service

Do you need a general sales manager? A district manager? A territorial representative? Or successful manufacturers' representatives?

Do you want to enlist the services of men who are of proven worth in the sale of automotive products?

If you want contact with men who can do things, and who know what it's all about, our suggestion is the use of advertising space in *Motor Age*.

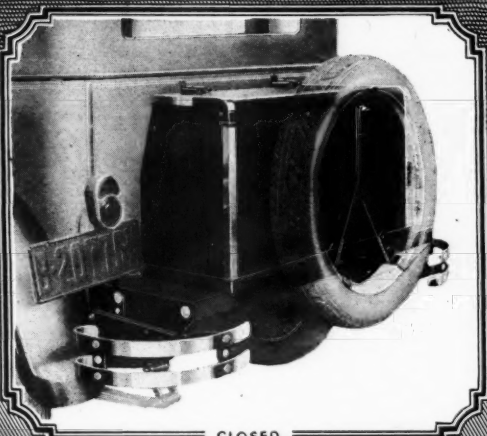
Our merchandising service department will be glad to co-operate in the preparation of the right character of copy—the kind of copy that will interest the very men who are qualified to tackle your job and handle it successfully.

Rates Upon Request

Address:

**Merchandising Service
Department**

**CHILTON CLASS JOURNAL CO.
Philadelphia, Pa.**



Kari-Keen
KARRIER
*The Baggage Car
 of the Auto*

Every Motorist is a Prospect

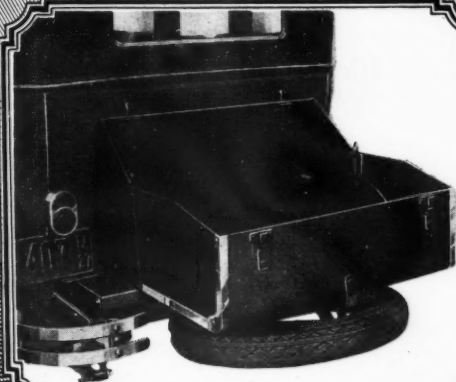
*Farmers, Merchants,
 Salesmen, Tourists or
 Men whose car is
 used for the family.*

IT is the easiest sold trunk and luggage carrier on the market today. When closed the Kari-Keen Karrier is a beautiful, useful trunk. When open it becomes a large, roomy luggage carrier with a capacity of 400 pounds and 8½ square feet. Made of steel, finished with lacquer and trimmed with nickel. No trouble to install—no holes to bore—no plates to make. Bumperettes and tire rack included.

DEALERS—Write for your territory, a very attractive proposition.

Dept. MA

Kari-Keen Mfg. Co.
 Sioux, City, Iowa



Now He Builds Spray Guns for You

Years ago O. R. Plummer was the local genius to whom the few cars in his community at that early date were brought for repairs and maintenance.

For painting them he made a spray gun. This gun—designed by a practical auto mechanic to meet the requirements as he knew them to be—was the beginning of the complete line of Plummer-Huff Company spray painting equipment.

First-hand knowledge of auto painting, and years of subsequent development along the same line, are built into every item of Handigrip spray painting equipment for repair shops, garages, and used car dealers—including Handigrip Junior, the new complete outfit for even the small shop or dealer.

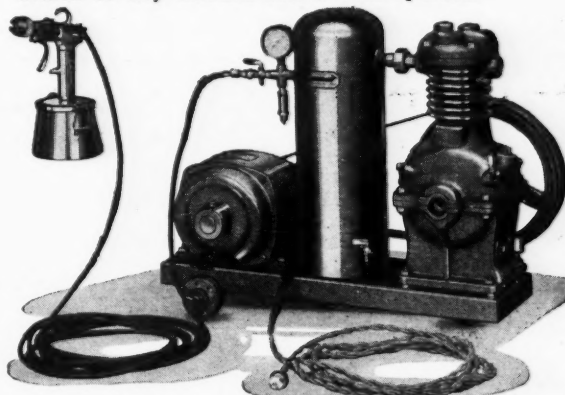
It embraces many exclusive Handigrip features, essential for high class painting. Easy to operate—except for the turn of a nut on the gun to adjust the flow of material, it does its work without adjustments of any kind.

Does either large surfaces or touch-up and patching, without change of parts.

Handles lacquer, paint or enamels.

Does an hour's painting in a few minutes, and practically eliminates sanding time.

Complete with air-compressor, motor (or gasoline engine), air tank and connections—ready to attach to any electric socket and operate.



Handigrip Junior Complete Outfit

Priced (Handigrip Junior) at only \$175; large outfits in proportion; Handigrip gun, with cup and hose, available separately at \$35.

Positively guaranteed by Plummer-Huff Company Refund Check. You can prove any Handigrip item in your own work without risk. Write us, kindly address Dept. M.

Plummer-Huff Company
Napoleon - - - Ohio

SKY WRITING

Lindbergh Byrd Maitland Hegenberger Acosta Chamberlin

Commander Byrd, New York to Coast of France, Fokker plane, AC Spark Plugs.

Lieutenants Maitland and Hegenberger, Oakland, Calif., to Honolulu, Fokker plane, AC Spark Plugs.

Col. Charles A. Lindbergh, New York to Paris, Ryan plane, AC Spark Plugs.



Clarence D. Chamberlin, New York to Germany, Bellanca plane, AC Spark Plugs.

Commander Byrd, North Pole and return, Fokker plane, AC Spark Plugs.

Chamberlin and Acosta world record endurance flight, Bellanca plane, AC Spark Plugs.

TRAIL BLAZERS OF THE AIR WRITE A MESSAGE FOR YOU

Dealers, tell your customers AC is the plug on which Lindbergh, Byrd, Chamberlin and other great flyers staked their lives.

Tell your customers you can give them the same kind of AC Plugs — same insulation, same quality of elec-

trode, same basic design, that made possible these record breaking flights. If you tell these facts, you can sell an even greater volume of AC Spark Plugs.



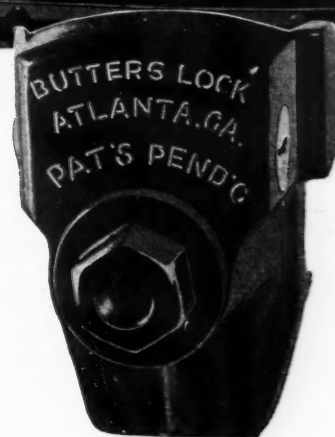
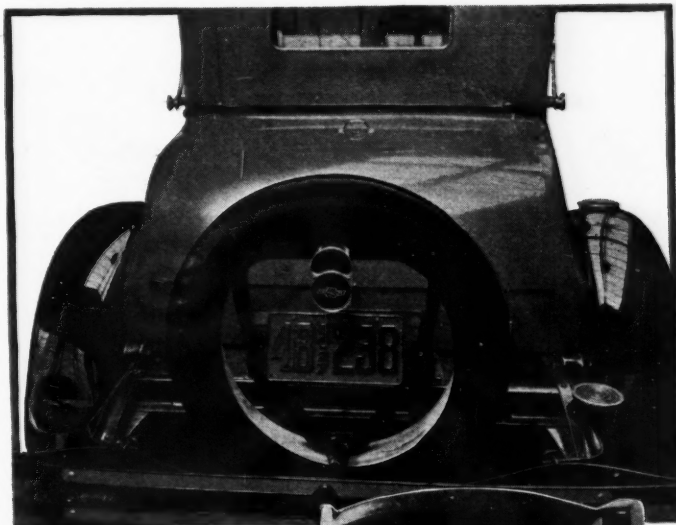
AC Spark Plug Company
Flint, Michigan

Makers of AC Spark Plugs—AC Speedometers
AC Air Cleaners—AC Oil Filters
AC Gasoline Strainers

AC-SPHINX AC-TITAN
Birmingham, England Clichy(Seine), France

Over 200 of the world's most successful manufacturers use one or more, or all of these AC Products
AC SPARK PLUGS AC SPEEDOMETERS AC AIR CLEANERS AC OIL FILTERS

This SPEEDY Seller



Should be speeding
profit to you

The fastest selling light car—Chevrolet—is not equipped with a spare tire lock.

Here's a good lock—for a tremendous market—retails for \$3.00. Built for Chevrolet Spare Tire Protection.

Strongly made, will withstand abuse—and has a durable dark finish to match carrier and to resist weather.

Ask your jobber *now* about this *speedy* \$3.00 sales builder. You'll be glad you did.

Thieves still steal tires. Owners hate to lose them. The Butters \$3.00 Spare Tire Lock affords all the protection necessary—Ask your jobber about this fast selling, low priced lock.

BUTTERS *Spare Tire* LOCK

BUTTERS MANUFACTURING CO., ATLANTA, GA.

Spare Tire Locks for Other Makes of Cars

E-HYDRAULIC-ELMES PRESSES
SINCE 1851

HYDRAULIC AUTOMOTIVE EQUIPMENT
Since the advent of the Pressed-On Tire, we have specialized on **TIRE APPLYING PRESSES**



Auto Body Press



Tire Press with Jib Crane



325 TON TIRE PRESS
Built to meet the service demands of large size truck tires.



Portable Forcing Press



Portable Jacks

Performance
Tire Press upkeep replacements equivalent to about $\frac{1}{4}$ of 1%.

Users
1,000 Service Stations and Fleet Owners. Hundreds of U. S. Army Models.

Construction
Annealed Steel Head and Cylinder. Forged Steel Pump Cylinders.

Features
Rotating Platen. Unusual Depth of Cylinder Throat. Combination Safety and Release Valve.

Capacity—Rigidity—Durability
PERFECT WORK — MINIMUM EFFORT — PRECISION

Charles F. Elmes Engineering Works
233 N. Morgan St., Chicago, U. S. A.
NEW YORK—Room 310, 30 Church St., Phone Cortland 4435
Export Office 420 Lexington Ave., Phone Lexington 4270



One Model Fits 'em All

There are good profits with a minimum investment selling Standard Safety Heaters. You carry only one size and model which, with a small assortment of adaptors, fits practically all makes of cars.



Small—over all length only $11\frac{1}{2}$ ". SAFE—one piece, gas-tight casting with no welded or brazed joints. No obstructions! No restrictions! Fresh, warm air whenever motor is running. Eliminates heat fatigue. Quickly and easily installed.

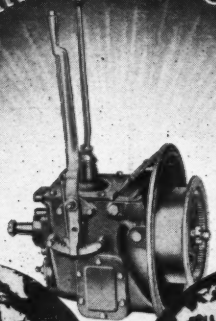

Black Arrows —exhaust White Arrows —fresh air

Send for prices and discounts.

Standard Tube & Mfg. Co.
2434 Scotten Ave. Detroit, Mich.

BROWN-LIPE

World Leaders
In Transmissions & Clutches

BROWN-LIPE GEAR CO.

GEAR COMPANY

There's always something new just at hand for the regular reader of

MOTOR AGE

Rubyfluid

TRADE MARK REG.


Makes a Tight Joint

The results of your work with Rubyfluid are right. You know that before you start.

That's why this non-corrosive, non-explosive, non-injurious soldering and tinning flux is preferred by mechanics everywhere. Do a job with Rubyfluid. You'll like it.

The Ruby Chemical Co.

68-70 McDowell St., Columbus, Ohio

DeLuxe (Oil) Relief PISTON RINGS



All motor troubles, such as oil pumping, carbon deposits, fouled spark plugs, etc., are eliminated by De LUXE RELIEF RINGS. This is an oil ring you can well afford to recommend and the price is right.

Write for complete information.

CORK-SEALED PISTON RING CORP.

2332 S. Michigan Ave., Chicago *Factory:* Denver, Colo.

Canadian Distributors: Cork-Sealed Piston Ring Corp.
Toronto, Canada.

**The most successful
merchandisers keep
at it every week - -**

in

MOTOR AGE

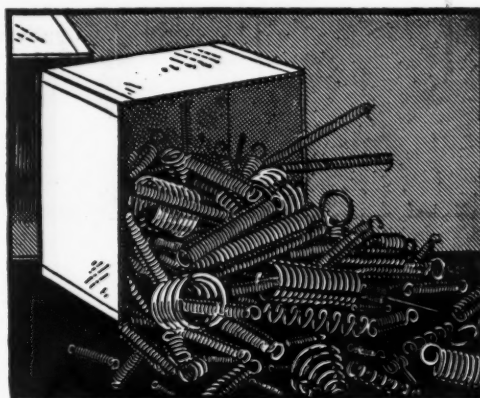
KISSEL

CUSTOM BUILT

**Completely
Cushioned-
In-Rubber**

Kissel Motor Car Co., Hartford, Wis.

100 SPRINGS YOU SELL FOR \$25.00
COST YOU 1.50



The spring you need when you need it

PECK'S Spring Assortment No. 1 costs you \$1.50. It contains 100 steel and brass expansion and compression springs in type and sizes needed most.

If you get 25 cents apiece, you make \$23.50 profit.

Other assortments at \$3.50 and \$5.00 with profit margins just as big.

If your jobber doesn't carry them, write us mentioning his name.

THE PECK SPRING COMPANY
PLAINVILLE, CONN.

**PECK'S SPRING
ASSORTMENT**

The Crowe pays for itself. One garage man calls it a mint. All talk about the perfect work it turns out and how pleased are customers.

The Crowe sells for only \$87.50. You will find it the best investment you ever made. Terms if desired.

Write for Information About

**The CROWE
CUPPED WHEEL
VALVE REFACER**



Large Shops and Small Ones
all over the country are
Making Money with
this NEW
Simple Efficient Low cost
VALVE REFACER

LISLE MFG. CO., 819 E. Main St., Clarinda, Iowa

Also manufacturers of the new Lisle Retiner (worn brake lining remover, lining cutter, retiner and tire chain mender — all in one). *Stickest tool you ever saw.*

SIMPLEX Piston Rings

give you six outstanding advantages. Stop oil pumping, stop piston slap, stop compression loss, force cylinder lubrication, reduce wear and increase power. Two Simplex Piston Rings to each cylinder, installed by the Simplex Method, recondition worn motors without resizing cylinders and installing new pistons.

Send for the Simplex Method of reconditioning motors without cylinder machinery, and make more money.

The Simplex Piston Ring Co.
of America, Inc.

1971 East 66th St., Cleveland, Ohio

In the Chrysler 52 **CARBURETER**

In Model 52, Chrysler performance reputation is entrusted to Carter carbureters. Carter principles have been auspiciously applied to the highly specialized requirements of Chrysler. Carter facilities, Carter precision, Carter responsibility have the added favorable recognition of Chrysler.

Always Carter carbureters qualify under the strictest check of every point, from excellence of material and manufacture, to sales prestige and sure ability to keep cars well sold. Nothing less could account for the fact that one of every three cars being produced in America today is equipped with a Carter Carbureter!

CARTER CARBURETOR CORPORATION, SAINT LOUIS
DIVISION OF AMERICAN CAR AND FOUNDRY COMPANY

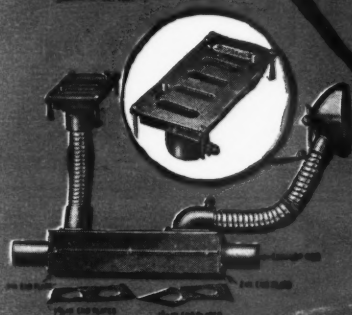


CHANSON

All quality HEATERS for all cars

A complete line of Exhaust and Hot Air Type Heaters creating a sensation among trade and public

Chanson
Universal
Hot Air
Heater
Model A7



No cutting of exhaust pipe—no fumes—no odors. Fits all cars.

List
\$5.50



Chanson Exhaust Heater

Model 1F (18" x 8" in.) Model 2F (11" x 8" in.)

The most effective register type heaters of their dimensions. Polished aluminum hinged covers. Pressed steel pan; clean-out door.

Model 2F... **\$13.50** Model 1F... **\$20.00**



Chanson Universal Toeboard Heater

Model R14—Pressed steel heating element.

Model RC14—Cast iron heating element.

Complete with valve and dash control. **\$8.50**

Chanson
Chevrolet
Special
Hot Air
Heater
Model A9



No cutting of exhaust pipe—no fumes—no odors. A quality heater at a price.

List
\$5.50

Let's talk heaters! Car owner wants dependability—dealer wants profits—jobber wants a complete line—everybody wants Chansons. Right now the world's largest Car Heater factory is going at top speed to produce enough Chanson Heaters to meet the demand. Orders should be placed **NOW**.

ILLINOIS IRON & BOLT COMPANY

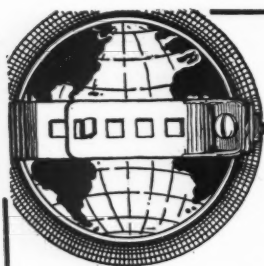
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ESTABLISHED 1864

Chanson Division

Manufacturers of Chanson Shock Absorbers

Carpentersville, Ill.



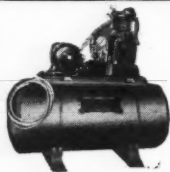
IDEAL HOSE CLAMPS

are used all over the
world

Do You Sell Them?

IDEAL CLAMP MFG. CO., INC.
200 BRADFORD ST. BROOKLYN, N. Y.

KELLOGG COMPRESSORS



Pump More Air per
Horsepower with
Less Oil

Kellogg Mfg. Co., Rochester, N. Y.

R.I.V. Means Quality
in Every Language



250 West 57th Street

New York City



Portable Electric DRILLS

GRINDERS—POLISHERS
Ask for Catalog 105

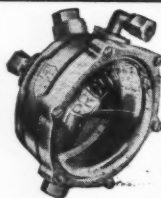
The United States Electric Tool Co. Cincinnati, Ohio, U. S. A.
Oldest Builders of Electric Drills and Grinders in the World

JAYENEL AUTOMOBILE Steam Heater

One model fits all makes and types
of cars and gives moist, healthy
heat without any odor instantly.



JUDD & LELAND MFG. CO., Clifton Springs, N. Y.



PROTEX-A-MOTOR GASOLINE PURIFIER JUNIOR MODEL

Fits Ford, Dodge, Chevrolet, Chrysler,
Erskine, Essex, Flint, Falcon-Knight,
Maxwell, Oakland, Oldsmobile, Over-
land, Pontiac, Star, Whippet. Standard
Model, \$5.00. PROTEx-A-MOTOR
MFG. CO., Pittston, Pa.

\$3.50

ONE PIECE SUITS

YOUR NAME ON
EACH SUIT

Protexalls are very inexpensive, yet wear like iron; stocked in
Khaki, Stripes and other fabrics. Spic and span attendants all
wearing the same uniform are the
cheapest form of advertising.



Protexall Company
Abingdon, Ill. Atlanta, Ga.

STATE AUTO. TRUNKS

2011-13-15 S. STATE ST.
CHICAGO, ILL.

Wide assortment of automobile
trunks for various model cars.
Absolutely new stock, each

Wire or write today for New and Used TIRES—
PARTS—ACCESSORIES—"If its for an Auto-
mobile We Have It." **\$9.95**

MCKAY TIRE CHAINS

MCK

UNITED STATES CHAIN
& FORGING CO.
Pittsburgh, Pa.

FREE

Handbook on Auto Washing

WRITE TO

Manley Mfg. Co., York, Pa., U. S. A.

THE G-H LINE

OF REPLACEMENT PARTS

Brake Springs, Clutch Plates, G-H
Tension Rings, King Bolt Lock Pins,
King Bolt Thrust Washers, Piston
Pin Retaining Springs, Valve Lifter
Assemblies, Valve Springs, Valve
Stem Keys, Valves.

G-H MANUFACTURING
COMPANY, Inc.

6-8 East Mount Royal Ave.,
Baltimore, Md.



SHERWIN-WILLIAMS

Paints, Varnishes, Lacquers, Enamels

Manufacturers of  Lacquer Enamel

Offices, Factories
and Warehouses
in Principal Cities

THE SHERWIN-WILLIAMS CO.
CLEVELAND, O.

An Advertising

Campaign in Motor Age right
now will build summer sales
MOTOR AGE

HALL HONE

\$39.75
at your
Jobbers

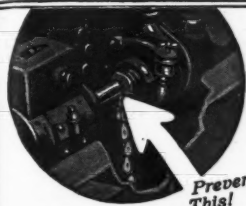
Solid Pressure — Spring Pressure

BRUNNER
AIR COMPRESSORS
FREE

Write for the Book
"AIR PROFITS"

describing many new uses for com-
pressed air. Shows how to make an
air compressor earn greater profits.

BRUNNER MFG. CO.
UTICA NEW YORK

**It's a Permanent Repair!**

Have a can of CONNEAUT PLASTIC METALLIC PACKING in your garage and be ready for the fellow who says he can't keep his water-pump from leaking. All sizes in one can. Stocked with your Jobber.

1 lb. can\$1.75 per lb.
5 lb. can1.60 per lb.

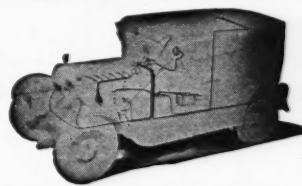
Manufactured by
THE CONNEAUT PACKING COMPANY
Conneaut Ohio

VESTA BATTERIES

VESTA BATTERY CORPORATION 2100 Indiana Ave., Chicago, U. S. A.
Central Distributors in 65 Leading Centers

Packard Cable

The Packard Electric Co.
Warren, Ohio

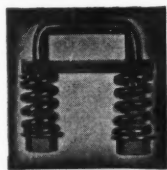


LYCOMING Motors

Fine Fours, Sixes and Eights-in-Line

LYCOMING MANUFACTURING COMPANY, Williamsport, Pa.

Years Ahead in Automobile Motor Efficiency



Orrville Spring Governors

Make Smooth-Running Profits

Among the foremost popular sellers for easier riding. Simple in operation and easy to install. Check the rebound and control the springs against "galloping". Ask for illustrated literature and discounts worth while.

ORRVILLE SPRING GOVERNOR CO., INC.
500 Brant Bldg. Canton, Ohio

Pat. Pending



U. S. Canada
THOMSON MFG. CO.
Dept. 21 Peoria, Ill.

If jobber does not stock
write direct

**Genuine
APEX Innerings**

Guaranteed to stop oil pumping
and piston slap and renew motors
without re-boring.

STANDITALL AUTO RADIATOR

Damageproof against repeated boilings and freezings. Built to last the full life of the car. Complete radiators for Fords, Chevrolets, Dodges and Maxwells. Cores for all cars and TRUCKS. If not at your jobber's, write direct.

J. C. Black Mfg. Co., Inc., Oil City, Pa.

BELLEVUE

Trunks, Trunk Carriers, Pumps, Bumpers, Jacks

See our combination trunk, trunk carrier, spare tire carrier and bumperette. COMPLETE line for all cars. Write for prices and nearest jobber.

THE BELLEVUE MFG. CO.

Bellevue, Ohio

Something New!

An Automotive Manufacturer with 25 years' experience and excellent reputation has produced an entirely new type and design of double-acting hydraulic shock absorber. It represents the most advanced ideas in spring control, is simple to install and requires no service.

For complete information, address

COVERT GEAR & MFG. CORP.
Grand Street Lockport, N. Y.

VITALIC

Fan Belts, Radiator Hose, Air Hose, Universal Joint Discs

"Tougher than Elephant Hide"

Sold through the Jobber Only.

Continental Rubber Works,

Erie, Pa.

SCHEBLER The World's Finest CARBURETORS

The Wheeler-Schebler Carburetor Co. Indianapolis, U. S. A.

TIMKEN Tapered ROLLER BEARINGS



FREDERICKS Rewinds

New low prices: Rewinding or exchanging any two unit type of automobile generator or starter armature, \$2.50. Any type of Ford armature \$1.50. Special prices on Ford armatures in quantities.

H. M. FREDERICKS CO., Lock Haven, Pa.

Tasco

TRADE MARK REG.

Gas Gauge for Ford
Chevrolet—Overland—Star
Sells quick at \$1.25 retail. Types
"K" and "J" for 1926 Chevrolets
and all Stars sell at \$1.50.

THE AKRON-SELLE CO.



AKRON, OHIO

CLASSIFIED ADVERTISING RATES

Ten cents a word is the rate for all undisplayed advertisements set solid; regular want ad style; minimum charge \$1 an insertion. All capitals, 12c a word; all capitals, leaded, 15c a word. Payable in advance.

GARAGE WANTED

Wanted—Hear from owner good garage for sale. Cash price, particulars. D. F. Bush, Minneapolis, Minn.

To locate business opportunities
To sell, rent, exchange or buy
To find men or employment

**THE CLASSIFIED DEPARTMENT
WILL HELP YOU**

C. L. PARKER

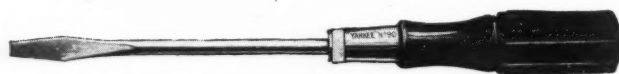
Ex-Examiner U. S. Patent Office

Attorney-at-Law and Solicitor of Patents

McGill Building, Washington, D. C.

Patent, Trade Mark and Copyright Law

This Man made his own tests



No. 90

Now he knows the kind of stuff "Yankee"
Plain Screw-drivers are made of



First, he tried the temper and toughness of the blade. With "Yankee" No. 90 he cut off a strip of steel, without chipping or even marking the blade.

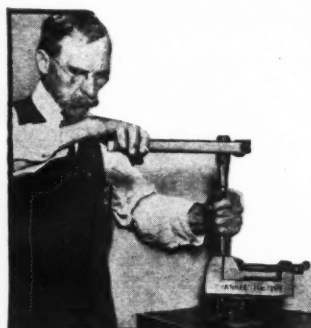


Then, with heavy blows on the handle, he drove the blade through the plank, right up to the ferrule—without splitting or loosening the handle!

Finally, with the blade held in a "Yankee" Vise, he applied tremendous leverage to the handle. But even this powerful twist failed to turn or loosen the handle.



Next he took this same No. 90, and with the blade cutting across the grain, drove it into a four-inch plank.



No. 90—Standard style, 15 sizes, 1½ to 30 inch blades.
No. 95—Cabinet style, 11 sizes, 2½ to 15½ inch blades.

Some Other "Yankee" Tools

Ratchet Screw-drivers Spiral Screw-drivers Brake Lining Cutter
Automatic Feed Bench Drills Ratchet Tap Wrenches
Vises, Removable Base Ratchet Breast and Hand Drills

Dealers everywhere sell "Yankee" Tools

"Yankee" on the tool you buy means the utmost in quality,
efficiency and durability.



Write for FREE "Yankee"
Tool Book

This interesting little book is for all lovers of fine tools. It tells just what you want to know about all the famous "Yankee" Tools for making work easier and quicker. Write for your copy today.

NORTH BROS. MFG. CO.
Philadelphia, U. S. A.

"YANKEE" TOOLS

Make Better mechanics

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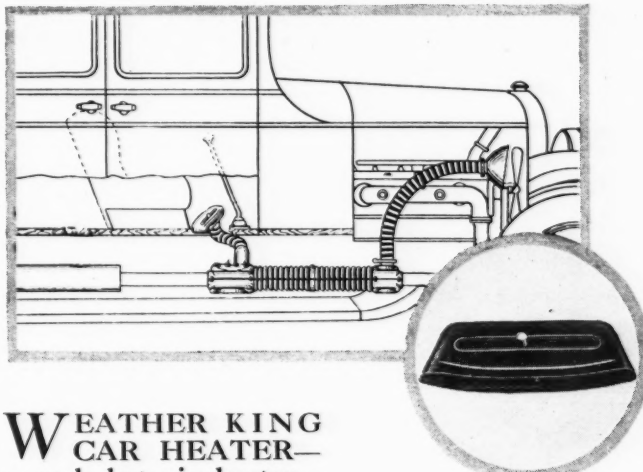
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Car Heaters and Radiator Shutters— the two big cold weather sellers!



Swivel Type Register

WEATHER KING CAR HEATER—

a real hot air heater—
 fume proof—because the
 fresh air taken into the funnel passes through a
 heater unit that surrounds the red hot exhaust
 pipe. This fresh air is then heated and forced
 into the car through a floor register. No fumes
 or gases—just abundant *heated fresh air*. One
 model is made in three sizes—fits all cars.

WEATHER KING SHUTTER—an all weather
 shutter—open fully in warm weather—
 closed fully on zero days—for ordinary winter
 driving the bottom half closed (it's the bottom
 of the radiator that freezes first) and the upper
 half open for ventilation to prevent overheating.
 Operated from the dash by a friction locking
 control. Two really seasonable items. Priced
 right—merchandised right. Two profits, two
 products for the investment formerly put in one.

METAL STAMPING COMPANY

Long Island City, N. Y.



WEATHER KING

Is Something for Nothing Always "Worth Just That"?

IT occasionally happens that the manufacturer of a product that is good, elects to introduce it by the distribution of free samples — or by the method of a free trial with returning privileges included.

This does not mean that the manufacturer is giving his product away, nor should the free feature belittle it in the minds of the trade.

The cost of free samples and free trials is legitimately charged to marketing expense — and should reflect the manufacturer's confidence in his product to satisfy, and make good.

MOTOR AGE

Chestnut and 56th Streets
Philadelphia, Pa.

for Economical Transportation



Selling A Truck That Provides

The
**World's Lowest
Ton-Mile Cost!**

In addition to the greatest passenger car sales ever achieved by a gear-shift automobile, Chevrolet dealers are enjoying a large and constantly growing volume of commercial car sales—

—for owners in every line of business have learned by actual use that Chevrolet provides the lowest ton-mile cost* in the history of the commercial car industry.

This great economy constitutes a sales advantage of the utmost value, for both fleet owners and smaller operators have learned to consider every item that enters into the cost of truck operation. Consequently, Chevrolet's low first cost, its low operating and maintenance costs, and its exceptionally slow depreciation are all of vital significance to the modern commercial car buyer.

*Ton-mile cost is the cost of transporting a ton of material one mile—or its equivalent.

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

~ at these Low Prices

1/2-Ton Truck Chassis	\$ 395	1-Ton Truck Chassis	\$ 495	1-Ton Truck Chassis with Cab	\$ 610
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All prices f. o. b. Flint, Michigan



The WORLD'S LARGEST BUILDER OF GEAR-SHIFT TRUCKS

Wood Wire Steel

*by Motor
Wheel*

A completely interchangeable line in addition to Motor Wheel wood and steel wheels with demountable rims. All built to the standards which have made this by far the largest wheel business. Not a single obstacle in the assembly line or on the sales floor. Every model, every dealer, every buyer, can have the extra worth of wheels by Motor Wheel.

MOTOR WHEEL CORPORATION
L A N S I N G , M I C H I G A N

